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(Continuing the California State Journal of Medicine)

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# CALIFORNIA AND WESTERN MEDICINE

VOL. XXII

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## ACUTE PANCREATITIS\*

By J. H. WOOLSEY, M. D., and G. D. DELPRAT, M. D.

*STUDIES during the past decade have warranted certain modification in our conception of the disease.*

*Symptoms now definite enough to warrant diagnosis.*

*The varying degrees of severity of the disease may be recognized clinically. The cause or causes still not fully understood.*

*Treatment may be conservative in mild cases, but in severe and recurrent cases surgery is the only safe treatment.*

ACUTE pancreatitis is not rare. It is a lesion frequently misdiagnosed as an inflammatory condition of the gall-bladder, duodenum or stomach. Not a mistake in diagnosis due to neglect of consideration for the condition as a possibility, but due to a misunderstanding of the course of the disease and the varying degrees it may follow. The diagnosis should more often be made pre-operatively.

Considerable progress has been made in the study of the pancreas in the past ten years and our understanding of the etiology and pathology of acute pancreatitis has had to be somewhat remodeled.

### PATHOLOGY

Fitz, in 1889, classified pancreatitis as hemorrhagic, suppurative and gangrenous. This classification is still employed and to it a fourth type, non-suppurative, has been added by others. However, the profession has come to realize that these several forms of pancreatitis are only separate stages of the same condition. For many years the dispute raged as to whether hemorrhage or inflammation was the primary lesion. Today it is known that a necrosis of tissue precedes both and that they are but attributes of the general picture. Archibald says, "the fundamental lesion (of all pancreatitis) is a necrosis of the parenchyma, a necrosis apparently caused by the action of a powerful chemical irritant rather than by bacterial inflammation, and that surrounding such areas of necrosis there occur the usual pathological lesions of reaction to an irritant, namely, edema, congestion, hemorrhage, in-wandering of leucocytes and of young fixed connective tissue cells and thrombosis." At the operation table one sees an enlarged gland, two to three times normal size, with irregular red, yellow or black areas upon a white background and on palpation one finds the gland indurated in a coarsely nodular manner with perhaps some of the red (hemorrhagic) or black areas of softer consistency. The gland is entirely covered with peritoneum of dull lustre. In the lesser peritoneal cavity, especially, but also in the general peritoneal cavity, may be seen fluid, serous, sanguinous, or seropurulent. Minute to  $\frac{1}{4}$  cm. areas of opaque white or yellowish white nodules, fat necroses, are seen in the omentum over the pancreas and have been found as far removed as in the mediastinal, pericardial or even the subcutaneous fat.

In four patients who came to operation on this surgical service, all showed marked enlargements of the pancreas. One, in which apparently a cholelithiasis and possibly a "ball-valve calculus" played a part, showed the chief enlargement in the head of the pancreas. Of the two cases that died one showed marked widespread necrosis of the pancreas, an intraperitoneal hemorrhagic fluid and fat necrosis in the omentum; the other patient showed an intraperitoneal seropurulent fluid, widespread intraperitoneal and omental fat necrosis. A fourth patient, operated earlier, and therefore in better condition than the other three patients, although suffering from the usual severe epigastric pain unrelieved by morphine sulphate, showed a general enlargement of the pancreas to three times normal with a constant hemorrhagic color interspersed with 0.5 cm. areas of the normal greyish white pancreatic tissue, a thin intraperitoneal sanguino-serous fluid and fat necroses in the large and small omenta.

*Fat necrosis* is caused by the lipase of the pancreatic juice splitting the neutral fat into fatty acids and glycerin, after which the former unites with calcium salts and so assumes the opaque white nodular appearance. The lipase is carried by the lymphatics and therefore acts at a distance. The question of whether the lipase needs some special agent for activation is disputed, but in the light of our present knowledge such an agent does not seem to be required.

*Trypsin* exists in the pancreatic juice in the form of an inactive pro-ferment, trypsinogen, which is activated by enterokinase in the duodenum, but is also activated by the tissue juices under certain conditions such as an inflammatory state where calcium is present. The necrosis in the pancreas in the acute stage is supposedly due to the autodigestion from the activated trypsinogen. The resulting split proteins from this digestion are absorbed by the lymphatics or blood stream in order to be excreted. In the light

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of our new knowledge of proteose intoxication and the demonstration by Cannon and his co-workers that "shock" is due in most instances to the broken down proteins, we see in certain clinical pictures of the severe acute pancreatitis an analogy to that of traumatic shock, intestinal obstruction and absorption from wounds covered by large amounts of devitalized tissue. Cyanosis of the lips and extremities associated with a loss of the local body heat, a lowered blood pressure and a general toxemia are the symptoms primarily of shock and should only be considered of secondary value in the diagnosis of acute pancreatitis.

#### ETIOLOGY

The cause of pancreatitis is still somewhat theoretical. Archibald attributes it primarily to the regurgitation of bile changed by lack of normal mucus into the pancreas through the duct of Wirsung. Others have corroborated this, especially when the bile contains bacteria or some irritant substance. Deaver, Maugeret, Graham and others have shown that the lymphatics have a definite course by which the pancreas may be involved secondarily from a cholecystitis, gastric or duodenal ulcer. That the condition may be hematogenous in origin is very suggestive, as it has occurred coincident with epidemic parotitis, typhoid fever, scarlet fever and furunculosis. Rosenow has demonstrated that micro-organisms cultured from the teeth and tonsils of patients with cholecystitis and pancreatitis have reproduced the same in rabbits and dogs. Trauma has been held responsible for pancreatitis. Haggard cites a case where a patient was seized with the severe epigastric pain on simply turning in bed, and presumably was proven to have an acute pancreatitis.

Of the five patients which led to the closer study of this condition, four definitely proven by operation, and one diagnosed independently by three physicians but not operated upon; two had gall-stones with previous history of gall-stone colic and typical indigestion; one had suffered a severe fall four months previously and undergone an operation for osteotomy of the radius just immediately preceding the onset of symptoms; one had been knocked down by an automobile twenty days previously, suffering severe contusions to the extremities, but without apparent abdominal or thoracic injury; and one gave a history of usual good health without either previous indigestion or injury. None had had any cutaneous, tonsillar, dental or cranial sinus infection.

#### SYMPTOMATOLOGY

**Pain**—The cardinal symptom of acute pancreatitis is pain. This is sudden in onset and excruciatingly severe. It is confined to the epigastrium and occasionally radiates around both sides to the midscapular region. Average-sized doses of morphine do not influence the acute exacerbations of the pain, which may be continuous for hours and then gradually subsiding. A history of previous "chronic indigestion" or "upper abdominal distress" may be misleading, for as frequently the patient is free from such symptoms. Jones states that after the first severe attack the pain in the epigastrium and in the upper lumbar region becomes "a great distress" from which the patient demands relief. In our series, after the

initial attack, the patients described the sensation as one of great weight in the upper abdomen.

Following and accompanying the pain is an epigastric *tenderness* over the area of the pancreas and equal in extent to the area of the pancreas involved. Preioni in a series of ten cases found it present in each case at a point 4 cm. above and 2 cm. to the left of the umbilicus. Ochsner describes the tenderness as located at Mayo-Robson's point and elicited by deep pressure over a point a little to the right of, and 5 to 10 cm. above, the umbilicus over the right rectus abdominis muscle.

**Rigidity of the Abdominal Muscles**—In this series three of the patients, those with the most severe symptoms, demonstrated moderate to marked rigidity, but two showed none whatsoever. Moynihan has found cases of acute pancreatitis to be lacking in rigidity, but Ochsner's experience has been to the contrary. Egdahl in a review of 107 cases does not speak directly of rectus rigidity, but refers to his failure of finding tender masses in the abdomen through the presence of a reflex spasm of the muscles. Archibald states "rigidity usually is absent or slight, except in the later stages when the peritoneum is involved." Rigidity of the recti in other abdominal lesions is present when the corresponding intercostal nerves or segments are irritated. It would seem, therefore, that it would not be present until the parietal peritoneum is involved. This may not occur in some instances, while in others with extensive fat necrosis, etc., it should be expected.

**Nausea and Vomiting**—Three of the patients had moderate nausea and vomiting; one, the most severe case, showed marked vomiting, and one of the severe cases, none at all. Nausea and vomiting are prominent symptoms as a rule. These symptoms, accompanied by distention, often lead to the mistaken diagnosis of intestinal obstruction. Persistent nausea alone does not occur.

**Abdominal Distention**—All patients showed a moderate to severe degree of distention directly proportional to the slight or marked peritoneal involvement. This symptom is listed by all writers and is believed to be due to irritation of the solar plexus, causing motor disturbances in the intestines. Egdahl describes it as a marked feature; out of 107 cases which he reviewed it occurred in fifty-four.

**Graphic Chart**—This is only of relative value. The pulse is rapid, ranging from 100-160 and of small volume. The temperature varies from 105.8 to subnormal. Egdahl found in twenty-two cases with accurate temperature observations one case with 105.8, two with 103 F., ten with 100 F., or slightly plus and six subnormal. The respirations are usually increased in rate and shallow, due in some instances to the pain of a deep respiratory excursion. Archibald states the pulse and temperature remain normal in the earlier stages, but if suppuration results or other complications, such as shock, intervene, the findings will change accordingly.

**Leucocytosis**—In this series the leucocyte count varied from 7000 in the most severe case (six hours before death) to 23,600. Other counts were 23,000, 16,000, and 15,000. Jones quotes leucocyte counts varying from normal to 15,000. Egdahl differentiates between the leucocyte counts occurring in the

suppurative type and in the hemorrhagic type, the latter being lower, but cites no figures.

*Cyanosis* was recorded only in the two patients that died. In one, on the fifth day preceding the end of life, and in the other from time of observance, twenty-four hours before death. This subject with the other signs of shock have already been discussed. It should be considered as a late sign—that is, when the degree of inflammation is most marked.

The *laboratory tests* of pancreatic insufficiency are of no value from the diagnostic point of view and are too complicated to employ when this acute condition presents itself.

#### TREATMENT

In the mild cases treatment must be supportive and symptomatic. Fluids must be forced, intravenous, subcutaneous or per rectum. Alkalies by mouth will decrease gastric acidity and reduce gastric motility. Morphine and its derivatives must be prescribed freely to alleviate pain and insure absolute quiet. Hot or cold packs are of little value, and although they may give some subjective feelings of comfort, are generally rejected by the patient who cannot bear the pressure of any object against the upper abdomen.

With our present knowledge, the treatment in the moderately prolonged or recurrent cases is surgical and decidedly so with the severe cases. Surgery endeavors to do two things—drain the toxic products of the pancreatic necrosis, which in addition aids to prevent further extension, and to relieve the cause—i. e., drainage of a gall-bladder or removal of a common bile duct block.

Drainage should be accomplished by multiple incisions in the covering peritoneum and capsule of the pancreas with the manual removal of all loose necrotic tissue. Incision into the pancreas itself is of doubtful value and most probably tends to produce paths for further necrosis, escape of additional pancreatic ferment and unnecessary hemorrhage. The drainage should be sufficient to allow the necrotic material to escape, and the drain can be brought anteriorly through the abdominal incision as well and as easily as through a separate left flank incision. The intraperitoneal fluid should not be drained or removed further than the overflow, for it has been proven to be harmless and is considered by many to possess protective qualities.

A cholecystostomy or choledochostomy may be indicated not only as an immediate measure, but also as a prophylactic value in the recurrent cases. A cholecystectomy, however, in the latter instance, should be considered preferable. Drainage of the bile tract for acute pancreatitis should be maintained for four to six weeks, and Archibald advises a period of three weeks to three months. A few advise strongly against a cholecystenterostomy. We can add no further information on this point, but this procedure is certainly an excellent one in other instances of block of the common biliary duct.

#### CONCLUSION

Acute pancreatitis is not rare. It occurs in varying degrees of severity and has definite symptoms and signs by which a diagnosis can be made. In the mild

cases it can be treated conservatively, but in the recurrent and severe cases surgery is the only safe method.

135 Stockton Street, San Francisco.

#### DISCUSSION

**Harold Brunn** (380 Post Street, San Francisco)—I am very glad of the opportunity to discuss this very excellent and timely paper. Acute hemorrhagic pancreatitis is frequently undiagnosed previous to operation. On the other hand it not infrequently enters into the diagnostic possibility in acute abdominal surgery, but more often than not is disappointingly absent. This state of affairs is brought about by several factors. In the first instance the disease is uncommon, its symptoms are variable, especially as regards leucocytosis and rigidity. The leucocyte count may be either high or low, depending on the stage of the disease or the severity of the involvement. The rigidity is either marked as in acute perforation, or absent as in obstruction. It is for this reason that a differential diagnosis between acute perforation, obstruction, and acute pancreatitis is difficult to make.

The onset of the disease is usually described as accompanied by severe shock and frequently cyanosis. In the cases that I have seen, while the pain was severe the shock as such was not a permanent symptom, nor was cyanosis observed. This, of course, may have been present, but transient.

One very interesting case shows how mild the symptoms of pancreatitis may be, going undiagnosed for a period of years until the final attack. This patient was seen with Dr. Meininger. She was a woman 29 years of age, very obese. Her attacks began during the second month of her pregnancy. They were at this time quite mild, accompanied by but slight fever and leucocytosis, frequently requiring morphine, however. After her childbirth the attacks occurred every six weeks to two months for a period of one year. The attack was ushered in first with severe upper abdominal pain, followed by vomiting, which seemed to relieve somewhat the pain. Many of the attacks lasted only a few hours, to return the next day; but the patient was never disabled more than a few days at a time, until the last attack, which occurred on September 18, 1917. This attack began at 4 p. m. with severe abdominal pain which she considered similar to her other attacks. Vomiting occurred at 8:30, which brought some relief, and the pain gradually passed off during the night. On the following day, about 4 p. m. the pain recurred and at 10:30 became excruciating, and was not relieved by three-quarters of a grain of morphine. She was operated upon the following day, when an acute hemorrhagic pancreatitis was found with fat necrosis in the omentum and a large quantity of bloody fluid in the abdomen. There were no stones found in the gall-bladder or biliary tract. The gall-bladder was not drained at operation. The patient recovered and has had no attacks since, an interval now of seven years. This case, therefore, illustrates very well the mildness of these attacks, which were evidently not due either to gall-bladder disease or gallstones, but must have been due, since she has been entirely cured, to the pancreatic condition.

In conversations with Dr. Whipple he always maintained that operation for acute hemorrhagic pancreatitis was unnecessary; that if recovery was possible, it occurred in spite of operation. He came to this conclusion through experiments on animals. I believe, however, that this theory is not sustained by practical experience. The removal of the irritating fluids from the abdomen by drainage protects the rest of the peritoneal cavity, relieves the patient, and gives the rest of the pancreatic tissue a chance to recover.

These patients are suffering from a proteose intoxication due to absorption of broken down tissue. They are, therefore, poor surgical risks and operation should be done quickly, with as little exposure as possible and as little trauma. The pancreas should not be blindly broken up with the finger. This adds materially to the shock, it is not efficacious, and much pancreatic tissue that might be saved is destroyed, besides

adding to the intoxication, since the broken down tissue cannot be drained away.

The pancreas lies retro-peritoneally behind the lesser sac. Therefore this sac should be drained down to the pancreas. If the head of the pancreas is involved, I have found the easiest point of drainage to be a right flank incision with a tube extending through the Foramen of Winslow into the lesser sac. We have found, where we have had drainage through the gastrohepatic omentum directly through the wound and a tube through the Foramen of Winslow passing out through the loin, that practically all the secretion is carried off through the tube and the dressings have to be changed constantly. Drainage through the Foramen of Winslow, therefore, is a very much simpler and more efficacious way of preventing the irritating fluid from entering the general peritoneal cavity. If the tail of the pancreas is involved, drainage should be made through the left loin, passing over the kidney into the lesser sac. If the case is operated on early and there is not much destruction of the pancreatic tissue, and it does not go on to necrosis, drainage for a week only is sufficient. When the operation is performed later with necrosis and sloughing away of the pancreas, counter incisions should be made large enough to permit of drainage for a longer period.

I believe, therefore, that operation is justifiable if it be remembered that it is an operation of drainage which should be done quickly and without traumatization.

**C. P. Thomas, M. D.** (Consolidated Building, Los Angeles)—This splendid paper of Drs. Woolsey and Delprat is very much worth while from every standpoint. Their classification of pancreatic troubles is most interesting and practical.

It would seem to me that inflammation here, as elsewhere in the body, must of necessity be of bacterial origin; the necrosis being due to the infection rather than the infection being caused by the necrosis. Owing to the liberal blood supply of this organ I cannot think of any chemical substance which could be there, that would cause necrosis unless it were accompanied by bacteria.

The enormous congestion and edema present in the pancreas in these cases, with usually increased leucocytosis, and sometimes without much necrosis, would, I think, also be further proof of its bacterial origin.

The fat necrosis found in remote portions of the abdominal cavity are doubtless late manifestations of the disease and secondary to the pancreatic involvement.

The doctors have very ably described the early symptoms of acute pancreatitis, and if it is due to infection, whether it is through the duct, lymphatics or the blood, is of but little practical importance.

I doubt very much whether real acute pancreatitis should ever be treated medically, and I am of the opinion that any violent upper abdominal pain accompanied by the characteristic shock symptoms which is not actually cleared up so far as that attack is concerned by one moderate dose of morphine, should be treated surgically and as early as possible. If opium and its derivatives were given less, or not at all, most of these cases would be gotten to the surgeon early enough to insure a very much greater percentage of cures. The cases I have seen have shown symptoms resembling perforating, gastric or duodenal ulcers, rather than those of appendicitis or gall-stone colic. Early surgical treatment of those conditions is also desirable.

Surgeons have known for a long time that chronic pancreatitis generally accompanied chronic gall bladder troubles, and doubtless occasionally acute pancreatitis is caused by stones in the duct or gall-bladder.

The treatment consists in proper early drainage, and the correct treatment of any complicating gall-bladder troubles, which may be present—all of which should be done quickly and with the least possible amount of peritoneal trauma.

I sincerely feel that Drs. Woolsey and Delprat are

entitled to credit here for their very able presentation of a very difficult subject.

**Dr. Woolsey** (closing)—The "irritative fluid" of which Dr. Brunn speaks must be understood as that composed of the necrosed pancreatic tissue which would then be absorbed or which may become the foundation for an infected abscess. The free peritoneal fluid occurring with this pathology is not irritative but protective, and drainage of this or any attempt to wash it out is therefore contra-indicated. We are grateful for his clear expose of the surgical treatment.

Necrosis of the pancreas, with the resultant pathology, is due primarily to an interference to blood supply which may and no doubt usually is of bacterial origin. The continuance of the tissue destruction and the symptoms of the patient, however, are due to a proteose intoxication as a result of the action of the liberated pancreatic ferments.

**The Exercise Cardiac Functional Test in 100 Cases of Heart Disease**—The exercise cardiac functional test is performed by requiring the subject to undergo some sort of vigorous exercise. In applying this test, Duane W. Propst, Chicago (Journal A. M. A.), has used a body-bending exercise repeated twenty times in forty-five seconds, and has taken the blood pressure at the intervals suggested by Brittingham and White. Among 100 men there were sixty-six cases of mitral regurgitation, eight of mitral stenosis, fourteen of aortic regurgitation, and twelve of combined valvular lesions. All were free from any evidence of heart failure at the time of the examinations. The results were at variance with those of the proponents of the test. The blood pressure reaction of all of the subjects with mitral regurgitation was normal; that is, there was neither a delayed rise nor a prolonged fall in the systolic blood pressures. Moreover, the diastolic pressures during the test did not vary more than 4 mm. of mercury from the pre-exercise levels, in spite of the fact that seven men gave a history of decompensation at from two to five years prior to my examination. On the other hand, the time required for the pulse to return to the pre-exercise rate was definitely prolonged in 53 per cent of the cases. In thirty-five of the series of sixty-six cases of mitral regurgitation, the pulse did not return, after exercise, to the rate at rest for from four to fifteen minutes. Two of eight patients with mitral stenosis gave abnormal blood pressure reactions to exercise. Of fourteen patients, with aortic regurgitation, only one gave a delayed rise in the systolic blood pressure. A tardy return of the pulse to normal after exercise was observed in half of the subjects. The effect of exercise on twelve men, handicapped by combined valvular lesions, was interesting. In every case the pulse rate remained more rapid than normal for more than four minutes, following the twenty body-bending exercises. The average time required for the pulse to return to the pre-exercise level was eight minutes. In no instance was there a prolonged rise or a delayed fall in the systolic blood pressure. Since only 3 per cent of his cases with organic heart disease reacted to exercise by the so-called abnormal blood pressure response, Propst believes that this form of functional test can have little prognostic value.

#### Prophylactic Inoculation of Dogs Against Rabies

—The evidence for the efficiency of prophylactic immunization in persons bitten by rabid animals has long been too convincing to permit of doubt. In Japan experiments to reduce the frequency of rabies by inoculation of the dog population show that its frequency with dogs has been greatly reduced.—(Journal A. M. A.)

## THE PSYCHOLOGIC FACTOR IN ENURESIS \*

By D. H. GIBBS, M. D., Los Angeles

The frequency with which we are consulted about bed-wetting caused me to review the literature that has been published on enuresis during the past ten years. The physiology of the mechanism of urination is not entirely understood. The work of Young, Cecil, Davis, Wesson, Stewart, Griffiths, Langley, Anderson, Mosso and Pellicani, Goltz and Ewald, Englisch, and others has done much to clarify this question. The spinal center of micturition in the conus terminalis is brought into relationship with the bladder by two sets of nerves: The hypogastric nerves, passing by way of the second and third lumbar nerves, and the inferior mesenteric ganglion to the vesical plexus, and the pelvic visceral nerves which pass through the third and fourth sacral roots to the vesical plexus direct. In adults the desire to urinate arises from stimulation of the sensory nerve-endings in the bladder wall, and in children under 2 years of age this stimulation sets up rhythmic contractions of the detrussor muscle associated with inhibition of the sphincters, resulting in a reflex emptying of the bladder uninfluenced by the will. At about this time the higher centers of micturition, which Stewart locates in the corpus striatum, the optic thalamus and the motor cortex begin to assert their hold on the spinal center, and the child gains control of micturition during the day.

By the end of the third year, control of the spinal center passes to the sphere of the higher centers, and becomes a habit, completing the education of the bladder. For a matter of discussion, I have considered that, in general, if a child habitually wets the bed after three years of age it may be said to be the subject of enuresis. Enuresis in children appears mostly at night. More rarely it may be present day and night. This emptying is involuntary and is accomplished without rousing consciousness.

Weitz believes that, normally, the contraction state of the sphincters is strengthened, partly reflexly and partly voluntarily, by the irritation produced on the brain by the contraction-feeling of the bladder, transmitted by way of the spinal cord. The absence or reduction of this irritation or interference with its transmission to the brain causes micturition to take place more easily. The irritation may be strong enough to be completely felt during the day, but so slight, or even absent during deep sleep, as to permit the unconscious emptying of the bladder. He, therefore, ascribes the absence or reduction of the contraction-feeling of the bladder as the pathogenetic cause of enuresis.

Sunden believes that consciousness is primarily at fault, and that dulling of the cerebral perception is the cause of enuresis. This may be developmental and associated with backward mentality, or due to profound sleep owing to the child being overtired mentally and physically, or to deficient oxygenation of the cerebral centers resulting from posture of the child, arrangements of blankets, or enlarged tonsils and adenoids.

Turner thought enuresis was due to a lack of development of the nerve center that controls the bladder, because it always appeared in young children. Grover and Fulton believe that enuresis is a definite symptom complex of disturbed reflex, which is the result of a general chronic neuro-muscular fatigue due to mental strain, lack of sufficient hours of rest and sleep, excessive muscular exertion and poor diet. This hypothesis is based on a study of over 200 cases, all of which were exceedingly active and nervous, had irregular sleeping hours, and were poorly nourished.

Walker believes that enuresis is due to the arrest of the education and discipline of the bladder. Nobel, because of his results in withholding water and foods of high water content; Nieman, by demonstrating that a potato and bread diet is rich in potash, which causes increased nocturnal output of urine; and Rietschel from his results obtained by dietetic treatment based upon his experiences with the war diet—rich in water, common salts, and carbohydrates—believe that diet plays an important part in the causation of enuresis.

Cameron assumes neurosis to be the cause, being produced by the sense of shame and mental distress involved. Klotz, studying the family history, lays the cause to a neuro-psychopathic constitution. Theimich, supported by the Breslau school, considers enuresis entirely a manifestation of hysteria. Williams, observing aggravation of symptoms following removal of tonsils and adenoids with rapid improvement upon giving thyroid extract; Hertoghe and Liopold Levi, upon observing good results after administering thyroid extract in certain cases, believe that thyroid insufficiency is a potent factor in the production of enuresis.

Van der Bogert believes that chronic gastrointestinal disturbances play an important role in the production of enuresis, and bases his belief on the study of his series of cases in which enuresis occurs at the age when gastro-intestinal disorders and gross errors in diet are common. Redway, because of the close association of the optic and micturition centers in the brain and the results of six cases treated, believes that some, if not all, cases of enuresis can be traced to errors of refraction.

Abst, Schwartz, Saxl, and Kurzweil give elaborate etiological classifications. Grover, in the study of 200 cases, gives the following interesting facts: Fifty-six per cent gave a family history of enuresis; 79 per cent had been present from babyhood; 36 per cent had had their tonsils and adenoids removed; 51 per cent of the boys had been circumcized; and 20 per cent gave a history of pinworms. Schwartz gives practically the same percentage in 226 cases. Enuresis is then not a disease, but may be simply the persistence of an infantile condition or habit due to a lack of the restraining influence of the higher centers upon the micturition center in the spinal cord.

### PROGNOSIS

The vast majority of cases recover; some earlier, some later, control being eventually established. The experience of the recent war showed a larger num-

\* Read before the Southern California Medical Society, Santa Barbara, April 4, 1924.

ber of adult males suffering from enuresis than was previously supposed.

#### TREATMENT

The therapy of enuresis is far more hopeful than it was formerly considered, for, as a matter of fact, with the right psychic influence and by the means of a number of recommended methods of procedure, it is possible to cure the vast majority of bed-wetters. At no time are reproaches of value. It is most imperative to gain the child's confidence and co-operation. Assurances of his cure are of therapeutic value. Nesnera reports very good results in treating his enuretic soldiers by suggestion alone.

Before making a diagnosis of essential enuresis, and outlining the treatment, it is imperative that the following causes of incontinence be excluded:

1. Congenital anatomical defects: Spina bifida occulta, malformations of the genito-urinary tract, such as hypospadias, epispadias, etc.
2. Gross surgical lesions; calculus of the kidney or bladder; tuberculosis, and all inflammatory conditions of the genito-urinary tract—vesico-vaginal fistula, etc.
3. General diseases, such as anemia, malnutrition, neurogenic diseases, diabetes, spinal cord lesions, etc.

In order to establish a cure and guard against a relapse, no matter what method of treatment is used, it is important to remove all sources of irritation, as phimosis, adherent clitoris, pinworms, masturbation, tonsils, adenoids, etc., and restrict all liquids and foods of high water content, insofar as possible, during the second half of the day.

The following methods of procedure, which have been highly recommended from time to time as cures for enuresis, will be briefly outlined; but whether they owe their efficacy entirely to their therapeutic value, or to their psychological effect is an open question. Practically all of the present-day writers believe that the success obtained with any method of treatment is due in a large part to its psychic influence.

In 1901, Cathelin's epidural method was first published and was immediately translated into many languages, and a flood of supporting publications followed. Today we know that epidural injections possess therapeutic value, though not absolutely dependable as a cure for enuresis. The best results are reported from a small series of selected cases by Sicard and Freeman. The technique is as follows: With the patient lying on one side in extreme flexion, pierce the obturator membrane through the hiatus formed by the sacral spinal prominence and its two lateral tubercles above, and the cornu of the coccyx below. Inject 5 to 20 cc. of a one-half of 1 per cent novocaine or a physiological salt solution at weekly intervals. Occasionally, six or seven injections are used. Keep the child in bed twenty-four hours with the foot of the bed elevated twelve inches.

The rationale of the method is based upon the epidural pressure effect upon the cerebro-spinal fluid, the direct pressure effect upon the filaments of the cauda equina and the reflex tonic effect upon the lumbar center. Certain modifications of the epi-

dural injections have been recommended as effective. The perineal injections of Cahier, Jaboulay's injection of normal saline between the coccyx and rectum, and simple spinal puncture, withdrawing 10 cc. of spinal fluid and injecting 12 cc. of normal saline solution. The success of these modifications has led some writers, notably Zappert and Rietschel, to draw the conclusion that epidural injection is a well-conceived, easily executed, and very impressive suggestion procedure.

Electricity is employed in many ways, making use of the galvanic, faradic or high frequency current. The negative electrode may be placed against the perineum, in the rectum, or by means of an insulated sound with an olive-shaped metal end directly against the membranous urethra. The indifferent electrode is placed against the lower part of the abdomen. The faradic current is perceptible but not painful intensity, about ten milliamperes, applied for three to ten minutes, repeated every three or four days, is most frequently used and should show results within one month. Von Buben has recently reported rapid improvement following treatment with thermo-penetration, which is a resistance heat generated in the tissue itself by a rapidly alternating current.

Many prominent German urologists and neurologists have assumed a primary underdevelopment or weakness of the internal sphincter as the cause of enuresis, and recommend the strengthening of this muscle by the use of electricity. It is now known that only a small percentage of cases belong to this group. Nevertheless, the results of electrical treatment are striking, especially in older children in which other methods have failed, probably due largely to the profound psychological effect.

Local treatment has been highly recommended by some urologists, but should generally be avoided in younger children. Weitzer advised flushing the bladder through a small catheter with silver nitrate solution, beginning with 1/4000, gradually increased to 1/750, twice weekly. Lippman reports 66 per cent of cures in fifty consecutive cases followed up for six months using this method.

Thompson, following the suggestion of Mullins, trains the bladder muscle by passing a moderate-sized catheter and funneling fluid under a pressure of 15 to 150 cc. into the bladder in increasing quantities, removing the catheter, and having the patient void, stopping and starting the stream several times. The quantity used depends upon the size and age of the patient. This treatment aims at dilating the bladder muscle and training the micturition controlling muscles to work more efficiently. Furch, Gross, and Sandek have recently obtained good results with this exercise-therapy of the bladder by having the patient retain the solution as long as possible.

Neave has simplified this method by having the child sit in a chair and hold the urine after having the desire to void. Cantley states that gradual dilatation of the bladder is not necessary or advisable in the majority of cases. The passing of a bougie-a-boule, as used by Emerson, causes an irritation of the posterior urethra and vesical neck, thereby intensifying the sensory impulse to the brain suffi-

ciently to attract the patient's attention by causing pain when the urine passes into the posterior urethra, until the habit of control is established. Abst recommends bi-manual massage, with one finger in the rectum and the palm of the other hand over the symphysis. We have been able to cure one case by gentle massage of the prostate.

The repeated passing of sounds and the cauterization of the bladder-neck have passed into disuse. Walker and many of the German writers believe the results obtained with any local treatment are due to suggestion rather than any local action. Closing the meatus with collodion belongs in the same category. Blum has devised a penis clamp, which can be had in various sizes, and for which he claims good results. Plato recommends the wearing of a urinal, and believes the results are due to the psychic effect and to the effect upon the child's health of a dry bed.

The drug method is probably the oldest and the one most frequently tried first. A great many drugs have been given as specifics for enuresis from time to time. Belladonna is still the favorite, and is given in increasing doses up to 20 minims of the tincture three times a day, under careful supervision to prevent an overdose. Johnson believes that belladonna should be used only to break the habit, and never to be pushed for more than two months. The alkaline treatment, potassium and sodium acetate, sodium bicarbonate etc., is used if urine is highly acid, and acid sodium phosphate if urine is extremely alkaline. Iron is given in anemic cases; bromides in extremely nervous cases (rarely indicated), and thyroid extract, strychnine, and other excitants should be used only in the apathetic atonic class of cases. Mikhailow reports nineteen cases cured following three or four subcutaneous injections of pituitrin given weekly in 1 cc. and 2.5 cc. doses, depending upon the patient's age. Fisher has cured enuresis by giving sulphonal in doses of one grain for each year of the child's life every night for the first week; every other night for the second week, and every third night for the third week. The course is repeated in two or three months if necessary.

Potatzky uses camphor oil, because of its sedative effect upon the irritated conditions of the urinary and sexual organs, its stimulating effect upon the brain thereby combating deep sleep, and its stimulating effect upon the circulatory system. Calcium lactate was added in cases of general reflex over irritability. This brings to mind the possibility of hypo-secretion of the parathyroids. Antipyrin, valerian, potassium bromide, hyoscine hydrobromide, extract of ergot, aromatic fluid extract of rhus, and many others have been given a thorough trial, and for the most part given up.

The dietetic treatment seems better supported and more promising perhaps, and has in recent years been more thoroughly and systematically investigated than any other method. But whether a definite diet can cure enuresis or prevent its appearance is doubtful, and has yet to be proven. Nieman and Rietschel have demonstrated that a potato and bread diet is rich in potash which retards the urine output until night. Nobel has been well satisfied with the therapeutic results obtained by withholding water,

not only in liquids, but also in solid foods with high water content. He furnished exact menus of variously concentrated food combinations arranged according to the Nem system. But as there were many relapses, and also because of the great difficulty of indefinitely depriving a child of water, Nobel's work is of more importance experimentally than as a method of cure for enuresis. The experience of the World War was a wholesale experiment of a diet leading to an abundant night discharge of urine rich in salts, and only such persons became bed-wetters in whom there was a local predisposition, or those who were previously enuretic. Diet relations may be a releasing, but not an etiological cause of enuresis.

There are, however, certain foods that should be eliminated from the diet in all cases of enuresis. Tea, coffee, and cocoa, as they are diuretic. Soups, broths, salty and highly seasoned foods are indigestible and diuretic. Bananas and raw apples interfere with the appetite and digestion. Sours and sweets, baked beans, corned beef, frankfurters, etc., should not be permitted. Meats and eggs should not be allowed for supper, and all liquids should be restricted during the afternoon.

Van der Bogert believes gastro-intestinal disturbances play an important part in the production of enuresis, and outlines his treatment accordingly. He goes into detail as to time, quantity, and quality of meals. Redway states that 90 per cent of enuresis is due to reflex irritation, and that some, if not all, are traceable to errors of refraction and can be cured by properly fitted glasses. He also believes that atropine cures enuresis by abolishing eyestrain.

Cold hydrotherapeutic measures help in the general strengthening of the nervous system, but are not to be used indiscriminately. Walker, Sundall, Carter, Cameron, Abst, Hale, Ash, Turner, Dunham, Zappert, Rietschel, and many others believe that the major treatment should be along psychotherapeutic lines, since enuresis is essentially a failure on the part of the higher centers to control and regulate reflex contraction of the bladder. This suggestive treatment can only be employed in older children and in children where there is no lack of mental development. There are various ways in which psychic influence may be employed. Gain the patient's confidence and co-operation, encourage him to believe that he will gain control, tell him that enuresis is a disease and is not shameful or discreditable, and impress upon him that the treatment to be used, whether electricity, injections—local, dietetic, or educational—will produce the desired results. The object is to assist normal development in the associative mechanism of micturition, thus tending to induce a conditional reflex.

Dunham applies suggestion by the presentation of a series of associative visual stimuli. He has printed on a card the following four sentences: (1) I am not going to wet the bed tonight. (2) I am going to wake up at midnight. (3) I shall get up and pass water. (4) I shall not wet the bed any more. The patient repeats these ten times, twice daily, and upon going to bed. The card is then placed under the child's pillow.

Walker employs suggestion during the waking

state, half asleep and half awake, by repeating to the child in simple expressions that the next time he wants to pass urine he will know it and wake up, get out of bed and empty his bladder. Suggestion under hypnotic influence has been employed in refractory cases with good results, but recent articles condemn it because of its unknown influence upon the child's mental development.

Dr. Frank Hamburger says of the various methods of treatment, "I can cure with any of them or without any of them." If he felt that he could not get into sympathy with his patient he would not treat him, and if he failed once he rarely tried again. Turner has cured 75 per cent of his cases by making an impression upon them.

After the removal of the underlying cause, with its contributing factors, the habit of unconsciously emptying the bladder will usually remain and must be corrected. This is accomplished by placing the child on a so-called enuretic regime. The patient is placed under the best hygienic conditions and on a definite diet, regular meals, no between-meals, no fluids after 4 p. m., etc. Rest is an important item; limit the child's activities after 4 p. m., a mid-day sleeping-period, and in bed at 7 p. m., as it is important to combat the profound sleep. The child voids at definite intervals during the day, and just before going to bed. These intervals during the day are usually lengthened once a week, depending upon the severity of the case. Once during the forenoon and once during the afternoon have the patient, when voiding, stop and start the stream several times. This teaches him voluntary control of the bladder.

The best time to awaken the child at night to voluntarily empty his bladder is a few minutes before the time he habitually wets the bed, which occurs at approximately the same time each night. If this time is not known, he should empty his bladder at 10 p. m., 2 a. m., and 6 p. m. If the bed is found wet at 10 p. m., the child should be awakened one hour after going to bed, etc., the object being to anticipate the involuntary micturition by a voluntary emptying of the bladder. As the treatment progresses, the 2 a. m. awakening may be omitted. The patient should be awakened on the minute. Have him get out of bed, turn on the light, go to the toilet, and, after he is thoroughly awake, voluntarily empty his bladder.

The following conclusions are justifiable: (1) During infancy the micturition reflex is automatic and uninfluenced by the will. (2) Enuresis is the involuntary emptying of the bladder, and does not rouse consciousness to the occurrence of the act. (3) Enuresis may be simply the persistence of an infantile condition or habit due to the lack of the restraining influence of the higher centers upon the micturition center in the spinal cord. (4) Eliminate all anatomical defects, surgical conditions, and general diseases that might cause incontinence before making a diagnosis of enuresis. (5) Remove all irritative conditions, correct the diet, and restrict liquids, to aid in the establishment of a cure and to prevent a relapse. (6) Since enuresis is essentially a failure of the higher centers to control reflex bladder contraction, the major part of the treatment should

be directed toward these higher centers. (7) The success of any method of treatment is due, for the most part, to its psychic effect. (8) After removing the underlying cause and its contributing factors, the habit of unconsciously emptying the bladder must be corrected.

In conclusion, I wish to express my appreciation to Dr. Arthur B. Cecil for helpful suggestions in compiling this article.

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#### DISCUSSION

**Miley B. Wesson, M. D.** (Flood Building, San Francisco)—Dr. Gibbs' paper is a most interesting and painstaking study, and he demonstrates clearly that the literature of the etiology and cure of enuresis of early life presents an almost hopeless maze of theories, each of which lays stress upon some particular aspect of the subject. Incidentally, none is supported by conclusive scientific evidence. Enuresis is commonly due to a functional irritability of the nervous system, and the literature tends to stress the removal of the local sources of irritation and minimizes the importance of certain general measures. The fact is, the removal of the cause rarely cures except in cases of vesical calculus, because of the habit factor. The establishment of a proper general regime is most important, and particular attention must be paid to early hours, plenty of sleep, avoidance of alcohol, tea, coffee, and sugars, and the removal of all causes of unnatural excitement. Everything possible must be done to improve the general muscular and nervous tone of the individual. Punishments are harmful, rewards valuable, and confidence in the doctor most important.

The passage of sounds, and the giving of bad-tasting medicines are helpful, primarily, because of the mental impression. The only drug of any specific value is belladonna, as it diminishes reflex excitability. My old teacher, Dr. von Pirquet, was very partial to strychnine and atropin, and their routine use, along with afternoon and night restriction of fluids and intelligent systematic training, has proven eminently satisfactory in my hands.

Bed-wetting ceases between the seventh year and puberty, since the cerebral centers develop and are able to control the spinal centers, even during deep sleep. Hence, our efforts are merely to help Nature bring about this result a few years earlier. Dr. Gibbs has shown very clearly that the 117 articles published on this subject in the last decade have added little to our knowledge of the cause and treatment of enuresis.

**Robert Lewis Richards** (240 Stockton Street, San Francisco)—Dr. Gibbs has given us the most complete account of the physical mechanism of enuresis and various treatments advocated. It is only by assembling all the evidence and judiciously weighing the facts concerned that any satisfactory conclusion can be reached. Most of the medical articles give a small sectional view of one man's experience and deductions, but do not review the whole evidence and all the efforts to solve the medical problem in hand. The judicial or legal point of view should be included in medical education so that medical evidence may be more fully presented and weighed. Consequently, such a finished article deserves especial consideration.

I am impressed that the underlying fact in enuresis is the mental fact of little or no responsibility until the brain structures are more complete and the relation of the personality or life pattern to enuresis is clear. "Children under two years are not expected to have full bladder control." By the same token, children at this stage have defective cerebral association or mind function, as shown by Fleshsig's and Brodman's studies of nerve fiber development and cortical architecture. Hence, one would expect not only defective functioning, but also a growing organism capable of more moulding and habit-shaping than a fully developed portion of the human organism. Certainly, the training and habits of bladder

control should be attempted before the stage of walking. With no training, this is left to chance and to rebellion against the discomfort of being wet. Besides, the emptying of the bladder has a pleasurable element, and I have frequently found the pleasurable sensation of "pseudo or early masturbation" associated with emptying the bladder at the same time.

The treatment in each instance mentioned claims nothing specific, but vaguely refers to a mental element, e. g., suggestion and mental impression. Painful impressions, the suggestion of strange impressive procedures, the system of rewards for success, have all been tried and lauded, but there is a strange medical reluctance to more than hints at a possible medical factor. The sick individual is lost sight of, in comparison with his spinal cord centers, sphincter muscles, prostate glands, and foreskin. Certainly, any physical defect has a bearing on the well-being of the individual and his self-control and ability to form proper habits. But it is wise not to deceive ourselves as to the methods of securing results and what we are really striving for. This gives a different point of view and prevents our expecting or promising immediate and complete results. Nocturnal enuresis, after eight years, notoriously accompanies nocturnal epilepsy, in which the convulsive seizure is missed and the wet bed discovered.

The bed-wetting of our military camps was noted to occur in persons with other psychopathic traits. The larger percentage of bed-wetting in that period, as compared with my prior ten years' experience in the regular army, strongly suggested that the stress of war in susceptible individuals had led to a reversion to infantile defects. Besides, the treatment in these cases was less successful in my experience. Hence, I am heartily in sympathy with Dr. Gibbs' attitude as to the mental factors involved in enuresis, and feel that he has kept this often-beclouded issue much clearer.

**Clara E. Finney, M.D.** (Black Building, Modesto, Calif.)—Dr. Gibbs' paper reminds one of the impractical attitude of many investigators toward enuresis as seen in every-day practice. We should not forget that enuresis is a serious domestic and social problem, rather than a medical one, to a large number of families in a community. True, it is presented to a physician for solution rather than to a sociologist, but few mothers would co-operate, either personally or financially, in the application in most of the methods of cure reviewed by Dr. Gibbs. The excellent point he makes is that, even though there may be underlying causes with contributing factors to be removed, the habit of unconsciously emptying the bladder remains to be corrected; and it is toward the breaking of this habit that the cures for enuresis should be aimed primarily. One has the impression that, of those children brought to the pediatrician, the large majority is suffering from the habit alone; though it was doubtless formed, primarily, from one or more of the many causes enumerated. Dr. Gibbs' paper seems valuable in that, after touching on the many factors, he outlines a practical, efficient regime, and one applicable to the majority of cases.

**Asthma Due to Grain Rusts**—During recent years, in parts of the northwestern states and Western Canada, rust fungi have attacked a considerable portion of the growing grain. Wheat, barley, oats, and rye in the maturing stage are hosts for special rusts. Wheat rust (*Puccinia graminis*) is the most prevalent. F. T. Cadham, Winnipeg (Journal A. M. A., July 5, 1924), has seen three patients suffering from asthma, in whom the exciting cause of the attack was a proximity to these rusts. The history of each case is similar: There was a short period of exposure to the infected grain, during which the person was evidently sensitized; then each one left the country or district for a year or more. Asthmatic attacks developed when the patient was once more exposed to rust-infected grain. Each case gave a positive cutaneous reaction to these fungi.

## GOITER SURVEY IN UTAH

By JAMES WALLACE, M. D., Salt Lake City,  
Epidemiologist for the State Board of Health

### PURPOSE OF THE SURVEY

A statewide goiter survey was begun during the present year by the State Board of Health, the survey having been made possible through financial aid from the International Health Board, federal authorities, and the State of Utah. From observations, army draft reports and a number of partial surveys made by the State Board of Health, it was believed that Utah was one of the goitrous areas of the United States. Moreover, it had become known that goiter was one of the easiest diseases to prevent, both as to cost and as to facility of application of preventive measures. As a scientific procedure it was necessary, in as systematic and accurate a manner as possible, to find out just how prevalent goiter was in the state. The survey was necessary, too, not merely that statistics might be collected, but that where prophylaxis was begun it might be known how we started, and later where we ended. In addition to all this, the State Board of Health was convinced that the goiter problem was a public health problem and a matter of serious concern to the state. Their view has recently been expressed by Dr. F. A. Collier of Ann Arbor, when he states "that all goiters are potentially dangerous and most of them do, in fact, eventually produce not only symptoms, but also definite pathologic lesions." They hold that the seriousness of goiter is not to be judged by the amount of disability it causes the child or adolescent (for usually it causes none), but the possible end-results. The survey was, therefore, preliminary to instituting prophylactic treatment which, it is hoped, will within a generation greatly reduce, if not completely remove the goiter blotch from the fair countenance of the State of Utah.

### EXTENT OF SURVEY

At the time of the closing of the schools for summer vacation, 69,256 pupils in the schools of the state had been examined, exclusive of the 1945 students at the University of Utah, examined by Dean Porter and associates of the university. The 69,256 pupils represent a school population of 88,108 or 64 per cent of the total school population of the state. The school enrollment is never quite equal to the school population, and an examiner at one visit can practically never get 100 per cent of the enrollment. With all these allowances, there was obtained nearly 80 per cent of the total school population in the areas surveyed.

The area covered included ten counties in which were sixteen school districts. In five of the counties the school district is co-extensive with the county; the other counties are divided into two or more school districts. The counties covered are Cache, Weber (Ogden City), Salt Lake, Utah, Tooele, Emery, Sanpete, San Juan, Grand and Garfield (incomplete). The area of these counties is over 34,000 square miles, or about two-thirds the area of either the state of Illinois or the state of Michigan. So far as the writer knows, Utah has at the present time the most extensive survey for goiter yet made in any state; and on account of the great

area covered, a great variety of conditions are represented. In Michigan, four counties have recently been surveyed, 31,612 pupils being examined. Prior to this, 26,215 pupils were examined in Grand Rapids. So far as known, there is no eastern and certainly no western state that has as extensive a survey as the State of Utah, and the end is not yet.

#### METHOD OF EXAMINATION

The method was to inspect the pupil in a good light, but inspection was not relied upon; the thyroid glands were palpated, and again palpated as the pupil swallowed. The examiner stood behind the pupil, the taller students being asked to sit, and were often palpated, both while sitting and standing. Where there was any suspicion of the presence of goiter causing symptoms, inquiry was made into the condition. In these examinations the co-operation of the local doctors was sought, and in some of the larger centers the local doctors made the majority of the examinations, but an effort had been made to standardize the diagnosis as much as possible that the findings by different examiners might be on a uniform basis and, therefore, comparable.

#### CLASSIFICATION

The common classifications into colloid, diffuse hypertrophy, adenomatous, and exophthalmic were used, but no serious attempt was made to differentiate colloid and diffuse hypertrophy. They were grouped together. As to size, besides the negative class there were four different groups for positives: (1) The question-mark group or pregoitrous group where the neck could not be pronounced negative, and yet the degree of enlargement was so slight that one would hesitate to say the individual had a goiter; (2) slight—any enlargement up to one inch; (3) moderate—an enlargement from one to two inches; (4) great—any enlargement over two inches.

#### FINDINGS

All pupils from the kindergarten up to the highest grades were offered the opportunity of examination. Of the 69,256 examined in the high and grade schools, 31 per cent of the boys and 54.3 per cent of the girls were found to fall into one of the four positive groups mentioned above; or 42.7 per cent of all students were found positive. If there be included the 1945 students examined at the University of Utah by Dean Porter and his associates, the total number becomes 71,201, with practically no change in the percentages of positives, for either the sexes or the totals, as the percentages found positive in the University were 31.2 per cent for males, 56.6 per cent for females, and 42.9 per cent for all examined. The 71,201 do not include over 3000 adults (a majority of them teachers), who were examined during the survey, but of whom no record was kept.

Of those found positive so far as tabulation is completed, it would seem that about 16 per cent belonged to the pregoitrous group; about 81 per cent to the slight; 2 per cent to the moderate, and less than 1 per cent to the great. (See diagrams 3 and 4.) In the highest age groups, a greater percentage of moderates and great enlargements was found. The number of moderates and great enlargements found

in males, as compared with females, just about corresponded to the ratio of positives for the two sexes. The difference in incidence between boys and girls is not great in the lower age groups, being only about as 2:3, but in the higher age groups the difference is more marked, being usually about 1:3. In very intensive areas the prevalence among males is almost equal to that among females, but where the conditions which produce goiter are not well marked, there is a greater relative preponderance of females; the female seemingly being more susceptible to slight goiter producing conditions. Apparently, the tendency in the male is for the incidence to grow less after he passes the period of puberty. In the female, on the other hand, there is no such decrease after that period is passed.

Of the 69,256 high and grade pupils examined, the age grouping was as follows:

Age group	5-9	10-14	15-19	20 and over
	23,412	30,413	14,398	1003
	33.8%	43.9%	20.8%	1.5%

The percentage of positives for these different age groups was:

Males	25.9%	36.4%	28.3%	24%
Females	40.1%	59.9%	66%	65.5%

(See Diagram 1.)

These findings are high, but not as high as those of some other states. Four counties recently surveyed in Michigan show from 26 to 64.4 per cent positive, or an average of 47.2 for the four counties.

One might be inclined to ask whether the incidence in Utah is becoming greater or less. There are no definite statistics to indicate the prevalence of goiter in past years, but some old-timers are of the opinion that there is much more goiter now than formerly, and some attribute the increase to the decrease in the number of wells and the more general use of water from the hills, through the installation of public water systems.

Another question that naturally occurs to one is, in how many cases will these enlargements of the thyroid gland persist? This is another question for which we have no answer, based on an observation of a large number of cases through a period of years, but in a recent house-to-house survey of adults made for the State Board of Health by Dr. F. I. Jansen, in a portion of the town of Spanish Fork 17 per cent of the males and 42 per cent of the females were found to have goiters. If the sexes were equally distributed, that would mean that 29.5 per cent of the adult population have goiter. In a complete survey of all the school children in that town, only 31.5 per cent were found to be positive; so that if this small survey is any criterion, it would seem that the percentage of recessions is not great.

The state survey indicated that there is no racial immunity to goiter, as Indians, Japanese, Mexicans, and Chinese were found to have goiter as well as Europeans and Americans; but there is a certain type of person, usually inclined to be stout, stocky, and fat (what is sometimes called the herbivorous type as contrasted with the carnivorous), in whom goiter is less often found than in the thinner type.

According to school districts, the survey showed Emery County to have the greatest number of posi-

tives, the percentage being 83.5, while Granite District, in Salt Lake County, was the lowest, with a percentage of 26.5. (See Diagram 2.) Individual schools ran from nothing to 100 per cent. There was only one school (Bacchus, Granite District) that was entirely negative, but it could hardly be taken as an index, as there were only thirteen pupils in the school, and only one pupil had reached the age of 10 years. The next lowest were two schools in Nebo District—Benjamin and Lakeshore—schools of considerable size that went as low as 6 per cent for positives. These schools are in the center of a valley, a considerable distance from the hills, and get their water supply from deep wells. On the other hand, in other sections it was not uncommon to find 75 per cent of the girls in the high schools with an enlargement of the thyroid gland.

Several pupils in different districts were found to have definite toxic symptoms: for example, one pupil in Provo High School, one in the Alpine District, two in Tooele County, and one in Cache County, were definitely diagnosed as toxic, while many others, e. g., five in North Sanpete and four in Cache, were marked for observation as being possibly toxic. There were also a number of cretins or cretinoids found in the survey; for example, in Emery County four were discovered. In very few cases did any form of goiter appear to cause the pupil any disability either in study or sport, but we have learned to judge goiters, not by their handicapping effect in the adolescent, but by the possible serious later effects.

#### RURAL VS. URBAN COMMUNITIES

Approximately one-half of the pupils examined in the high and grade schools were in the cities of Salt Lake, Ogden, and Provo, the other half being in the country or smaller towns. The average percentage of positives for these cities was, roughly, 44 per cent, while for the rural portion the average was about 40 per cent. This does not correspond with the findings for Cadillac County, Michigan, as shown by a preliminary report from the Michigan State Board of Health. There the rates were higher in the country than in the town. In Utah, however, we find that generally the rural rates are lower where the water supply is local; that is, from shallow or deep wells, but where the supply comes from the hills the rural rate is higher than the city rate. There have been a few exceptions to this rule, but not many. In general, the nearer the district is to the hills the greater the incidence of goiter. Of course where the water is brought by pipe or stream from the hills, a community may be a long distance from the mountains and yet get the same supply as those who live on or hardby the foothills. The pupils in the school at Saltair (almost in the middle of Great Salt Lake) have their water hauled from Salt Lake City, which city gets its water from the hills. The average percentage of positives for Salt Lake City was 41.6, and for Saltair 42.3.

In the rural sections a much larger percentage of marked goiters (moderate or great enlargements) was found than in the urban.

If, as is now generally accepted, goiter is a deficiency disease due in the beginning to an insuffi-

ciency of iodine, this does not mean that additional agencies may not be factors in actually inducing goiter in individual cases. McCarrison says there is more goiter among the poor than among the rich. In intensive areas it seems that goiter is no respecter of persons, but well-to-do people are likely to travel more and have a greater variety in their water and food supply. Small rural communities are likely to be limited in both their water and food supply to purely local products. In remote parts of the country, too, medical service is usually not so readily available; also, in making comparisons between districts one has to consider the congenital aspect of goiter. All children are not born free and equal, as far as goiter is concerned. If they are the offspring of parents who have lived for some time in a goitrous area, they are likely to have started life with the handicap of a deficiency. In some schools over 50 per cent of the first grade pupils, only 6 or 7 years of age, were found to have enlarged thyroids. This could not be due to any physiological change such as takes place at puberty. It shows, too, the necessity for attending physicians to see that all pregnant women in a goitrous area have an adequate supply of iodine. In North Sanpete High School, 50 per cent of the positive cases were able to say definitely that their mothers, sisters or brothers were known to have goiters.

#### WATER ANALYSIS

Dr. J. F. McClendon, Professor of Physiological Chemistry at the State University of Minnesota, volunteered to analyze for iodine content samples of water from different parts of the state. Already several samples, evaporated according to directions, have been submitted to him, but as yet no report of his findings for Utah waters is available. In a recent number of the *A. M. A. Journal* (May 24, 1924), Dr. McClendon shows the relation that exists between iodine deficiency in food and drink and the incidence of goiter, and submits analyses of water samples from nearly thirty states, but Utah is not in the list. The work of McClendon parallels the work of Fellenberg in Switzerland, in 1923, who showed that in his country the percentage of iodine in the water in different localities was in inverse ratio to the prevalence of goiter.

#### INFORMATION

In connection with the survey an effort has been made, without unduly alarming anyone, to carry the facts regarding local conditions to the people, to give them information on goiter generally, to urge them to take suspected cases of goiter in adults to their physician for diagnosis and advice; and for children to provide prophylactic treatment for all negative or incipient cases, while they were urged to take to the family physician all toxic, adenomatous, and chronic marked cases of simple goiter.

#### PROPHYLAXIS

For prophylactic treatment in the schools, the State Board of Health has been urging the use of chocolate tablets containing 10 milligrams of iodine, one tablet to be taken once a week for the forty weeks of the school year. For school purposes, these forty tablets or a year's treatment can now be ob-

tained through the State Board of Health for the sum of 25 cents. Already prophylactic treatment has been begun in the schools of Tooele, Emery, Grand, Utah, and Sanpete counties, and a small beginning has been made in some other counties. The time for school-closing for summer vacation was so near when the survey was made in some of the school districts, that it was thought to be more practical to begin prophylactic treatment with the reopening of the schools.

On June 1 of this year, a state law in Michigan became effective whereby no salt is allowed to be sold in the state unless it contains a certain percentage of iodine. A similar law for the State of Utah has been urged for the past two years by Dr. T. B. Beatty, State Health Commissioner. In Sault Ste. Marie, Michigan, and in Rochester, New York, sodium iodide is being put into the public water supply. The method of administration is largely a local question. The main thing is to see that those who need iodine receive it, that it is available in a palatable and convenient form, and that it is either supplied at the public expense or at a very low cost to the individual.

The success of the survey has been very gratifying. The medical profession have given commendation and support to it, by participating in the examinations, by public address and by private conversation, the school authorities have welcomed it, the teachers have co-operated so as to make the survey easy, the press has given publicity to the progress of the work, and altogether the difficulties have been much less than we anticipated.

#### POINTS THAT MAY BE NOTED

1. The incidence of goiter varies greatly in dif-

ferent counties and in different localities in the county, though no place surveyed can be said to be goiter-free.

2. The average percentage of positives is 42.7 per cent.

3. The ratio of the sexes as to goiter is about two females to one male.

4. Recessions in the enlargement of the thyroid

STATE OF UTAH  
Goiter Survey  
Percentage of pupils, male and female, in the different age groups found to have enlarged thyroids; in an examination of 69,256 students in the schools of ten counties of the State.  
1924

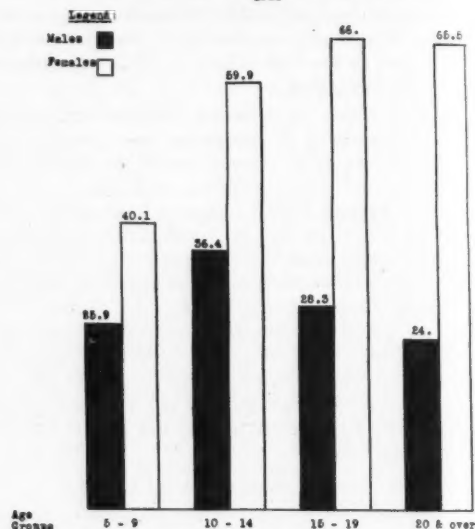


DIAGRAM 1

#### UTAH STATE BOARD OF HEALTH GOITER SURVEY

##### A Comparison of 16 School Districts

School District	Males			Females			Aver. Per. Positive for District
	Positive	Negative	Per cent Positive	Positive	Negative	Per cent Positive	
Cache County.....	715	1,305	35.4	1,352	904	59.6	48.9
U. A. C., B. Y. U. and N. J. A....	80	261	23.4	285	181	61.1	45.2
Emery County.....	664	175	79.3	665	39	82.2	83.5
Grand County.....	80	52	60.6	95	45	68.4	63.6
Garfield County... (incomplete)	106	160	39.8	171	57	75.0	56.0
Utah County							
Alpine .....	448	1,351	24.9	880	931	48.6	36.7
Nebo .....	498	1,769	21.9	978	1,243	44.0	32.9
Provo City.....	663	1,284	34.6	1,135	811	59.0	46.3
Salt Lake County							
Granite .....	439	2,175	16.7	926	1,600	36.6	26.5
Jordan .....	478	1,484	24.2	845	995	45.1	34.8
Murray Town....	123	453	21.3	275	304	48.1	34.4
Salt Lake City... I. D. S. and	3,665	8,533	30.0	6,489	5,675	53.3	41.6
Other Schools...	126	593	17.5	631	556	53.1	39.7
San Juan County..	134	130	50.8	177	57	75.6	62.4
Sanpete County							
North Sanpete....	458	683	40.1	668	394	62.9	51.1
South Sanpete....	334	782	29.4	660	487	57.5	43.9
Tooele County....	285	540	34.5	450	352	56.1	45.2
Weber County							
Ogden Schools...	1,315	1,827	41.8	2,126	1,221	63.5	53.0
Other Schools.....	40	112	26.3	142	124	53.4	43.5
Total .....	10,657	23,670	31.0	18,950	15,979	54.3	42.7
University of Utah	327	720	31.2	508	390	56.6	42.9
Grand Total...	10,984	24,390	31.0	19,458	16,369	54.4	42.7
Total males examined.....							35,374
Total females examined.....							35,827
Total for both sexes.....							71,201

#### UTAH STATE BOARD OF HEALTH

##### Goiter Survey

A comparison of 16 school districts, in 10 counties of the State as to the incidence of goiter in the pupils of the High and Public Schools.  
(Per cent Positive)

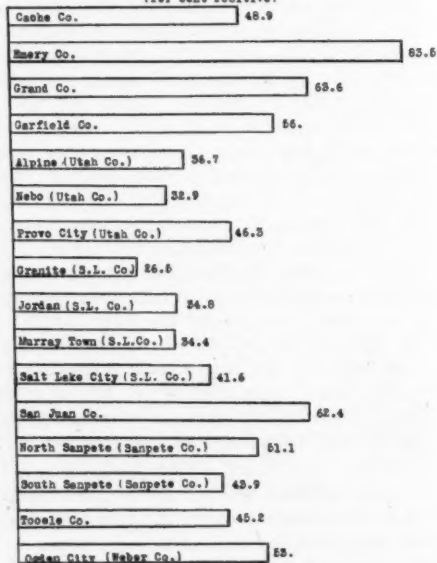


DIAGRAM 2

seem to occur more frequently in males than in females.

5. The percentage of goiters that naturally recede without treatment of any kind would seem to be small.

6. There is no racial immunity to goiter.

7. Communities getting their water supply from the hills generally show a higher incidence than those using well water.

8. Rural sections have a higher incidence than urban only when their water supply comes from the hills.

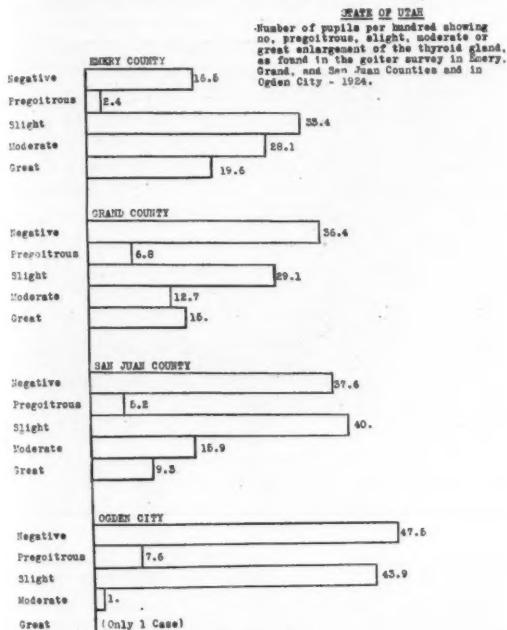


DIAGRAM 3

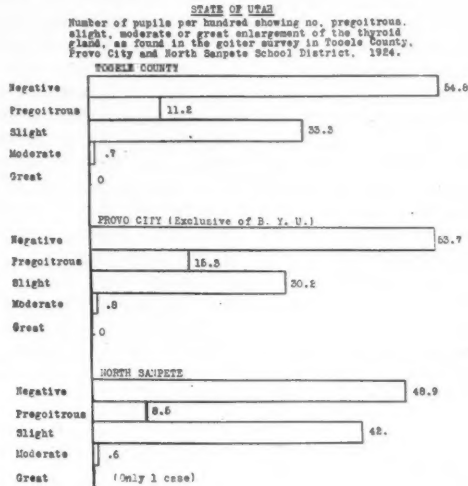


DIAGRAM 4

## A CASE OF CONGENITAL SYNOSTOSIS OF RADIUS AND ULNA

By C. B. BENNETT, M. D., Berkeley  
(From the University of California Infirmary)

The following case of congenital synostosis of the radius and ulna is presented because of its comparative rarity. Only about twelve cases have as yet been reported from the United States, although the condition is far commoner than this statement would imply. Doubtless one reason for this dearth of reports is that the deformity causes so little discomfort that many suffering from it never consult a physician. The deformity usually presents the following picture, which seems to be as definite a clinical entity as club-foot or any other well-known condition.

The synostosis usually occurs at the proximal ends of the forearm bones, which are united for a distance of three to six centimeters. The affected forearm is apt to be shorter than normal, and the hand is held in more or less pronation, which is often extreme. The distal end of the radius is usually heavier than normal, while that of the ulna is frequently the reverse. Obviously there is no movement between the two bones, although the joint with the humerus is usually unaffected. The condition is frequently bilateral. Occasionally synostoses of the distal ends of these bones have been reported from Europe, but are decidedly less common. As to the etiology, Bardeen and Lewis found that in an embryo of four and a half weeks, the radius and ulna were distinct below but fused above, and that only after

several more weeks did the two bones become quite distinct and free. It would appear, therefore, that in this deformity we have the result of an arrest at a very early age of the normal process of separation of these bones. Just what causes this arrest is not known. Some have stated the condition to be hereditary, but in the majority of cases this does not seem to be true. In only one of the families reported in America was the hereditary tendency shown. In this case, reported by Feidt, the grandfather, mother and daughter, all had this deformity. On the other hand, Painter reported that his case was "the youngest of twelve children, all the others being well in every respect, and neither they nor the parents have, or have known of, any skeletal defect in their respective ancestors." Similar negative family histories were noted in most of the other cases.

Operative attempts to separate the bones and obtain normal movement have practically always failed, and a critical review of the very few cases in which success has been claimed makes one agree with Gibson that they do "not provoke enthusiastic encomiums." One reason for expecting an unsatisfactory result is that the supinator (brevis) is usually poorly developed, or absent altogether in these cases, while the pronator quadratus is abnormally short. This makes the probability of useful function very doubtful. A more serious obstacle is that the union between the two bones is usually so long that it has been practically impossible to prevent subsequent development of synostosis again after the bones have been

once separated. Probably the only surgical procedure which should be considered at all is, as pointed out by Gibson, whether or not a reduction of the more extreme degrees of pronation by a simple osteotomy followed by immobilization in a corrected position, would not result in a more useful arm. That this congenital abnormality produces astonishingly little disability is well shown by the fact that frequently the parents never noticed the condition until the child was several years old.

Among the cases reported from this country we find the following nationalities represented: One colored, one Italian, four Russians, and six whose nationalities were not stated; five females, three males, and four whose genders were not stated. The following case is especially interesting, as the patient has also another marked congenital defect—that of an undeveloped left eye. In the cases reported from the United States there have been no other congenital defects noted in any of the subjects, although these are not lacking in the European reports, and Evans in England has recently published a case of bilateral radio-ulnar synostosis associated with bilateral congenital dislocations of the hips.

#### CASE REPORT

W. S., a young man of 21 years, born in the United States, both parents born in the United States of English extraction, came on January 25, 1924, to see if it was possible to enable him to rotate his left forearm. The inability to turn the forearm was first noted by his parents when he was about 4 years old and has persisted ever since. He was a full-term child, the sixth in the family, and was delivered normally after an easy labor. There was no history of trauma at any time. His grandparents on both sides, both parents, his one brother and six sisters have never had any similar trouble.

Physical examination negative in every way except for an undeveloped and blind left eye from birth and the condition of the left forearm. The latter was one-quarter of an inch shorter than the right, was held in extreme pronation, and was one and one-quarter inches smaller than the right in circumference at the maximum point. Roentgenograms revealed the characteristic union of the proximal ends of the left radius and ulna for a distance of about two and one-quarter inches (six centimeters). The humero-ulnar joint movements were normal, no limitation of extension was present. The condition throughout was typical in every way. The other arm was normal, both clinically and radiographically. As the pronation in the affected side did not cause much inconvenience, the patient was advised against any operation at present.

1122 University Avenue.

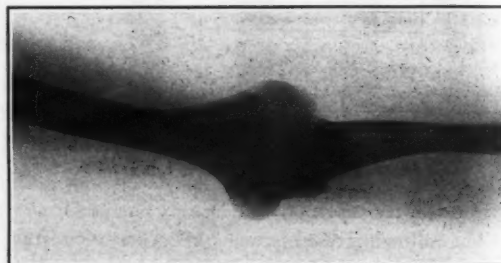
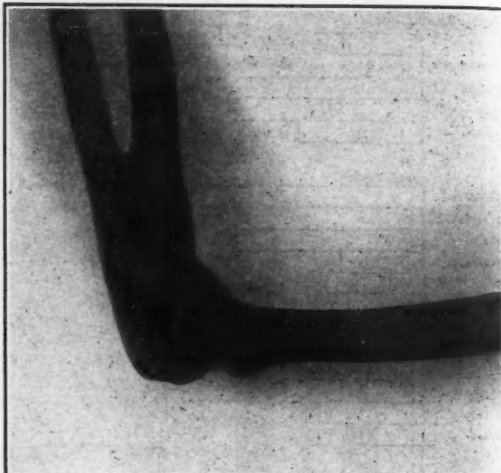
#### DISCUSSION

**Lionel D. Prince, M. D.** (Flood Building, San Francisco)—It is my belief that congenital synostosis of the radius and ulna is far more prevalent than one might deduce from a perusal of the literature on this subject. As with other congenital deformities, all cases seen by physicians are not reported. Most of the discussion in literature is concerned with the possible methods of surgical interference for the relief of the condition. As a result of the synostosis between the two bones at their upper ends, all pronation and supination movements are lost and the forearm is usually fixed in the full pronated position.

Operations have been devised to permit the rotation of the forearm, which is usually accomplished through section or removal of a piece of the radius just distal to the synostosis. Some of the cases reported in the literature have shown a fair amount of improvement, but the prognosis insofar as improvement is concerned following operation is very doubtful. In adults, I believe, improvement through surgical interference is rather hopeless, owing to the fact that there usually exist combined congenital anomalies

of the soft structures of the forearm so that even in the event that there is obtained some passive rotation of the forearm, the muscles which normally accomplished these movements actively are either not present or atrophied beyond any possible restitution. In children there is, of course, an opportunity to improve the condition, and in selected cases operative intervention might be considered.

Some years ago I had a very unfortunate experience



with a young Italian girl on whom I performed a section of the radius with the removal of about one-half inch of the shaft. The condition was bilateral and the forearms were fixed in full pronation. At the time of the operation following the removal of the section of the radius, the forearm could be easily supinated, and accordingly it was put in this position and retained by means of a plaster of paris cast. The hand became quite swollen and cyanotic, and in spite of the fact that the cast was removed as soon as the seriousness of the condition was noted, gangrene of that portion of the arm supplied by the radial artery resulted. The thumb and most of the radius sloughed away and an eschemic paralysis resulted in the remaining fingers. It is my belief that the tortion correction occluded the radial circulation, giving rise to the disastrous results. When the operation of the removal of the section of the radius is done it would probably be more advisable to accomplish the correction at a period subsequent to the operation, and then gradually by means of several plaster of paris dressings.

**Doctor Bennett** (closing)—The danger pointed out by Doctor Prince of the possibility of interfering with the blood supply when the deformed arm is supinated to what is ordinarily well within normal limits is most interesting and instructive. No reference has been made to the splendid article on these deformities by Davenport, Taylor, and Nelson, as it had not appeared when this paper was prepared.

## POLIOMYELITIS, WITH ESPECIAL REFERENCE TO TREATMENT WITH ROSENOW'S SERUM \*

By FRED B. CLARKE, M. D.,  
Long Beach, Calif.

Acute poliomyelitis is an infectious disease occurring either in endemic or epidemic form, and since the time its epidemic nature was recognized and commented upon by observers in Sweden, in 1868, and in Norway in 1881, there have been numerous epidemics, worldwide in distribution, the most severe in the United States occurring in New York and the Middle West in 1907, and in New York and Massachusetts in 1916. During these years, less severe epidemics occurred in various states.

It is the general consensus of opinion that epidemics are becoming more frequent with more or less periodicity. In 1916, there were 13,000 cases in New York, with 3300 deaths, a mortality of approximately 25 per cent. The percentage of patients to population is of interest; there were 1.6 cases per thousand in New York City, and in the rural districts 2.6 per thousand patients, and the average age at the time of infection was 2.8 years.

Why a more or less periodicity should occur is not known. Flexner, Amoss, and Clark have carried a single strain of virus through monkeys for a period of four years. This strain was of low virulence in the beginning; rose to a maximum for three years, and then decreased suddenly to the initial level of virulence. The same transformation in virulence of the virus present in a community may be a factor due to children who are non-immunized. Considering the rarity of the disease in children under 1 year of age, and the relative immunity of children past the age of 5, it seems that we must be dealing with a problem in which the age is an important factor. Children under 1 year of age seem to have acquired an immunity from the mother which affords them a reasonable degree of protection.

There are many interesting things observed in the study of experimental poliomyelitis. Landsteiner and Popper, in 1909, were able to produce in monkeys a typical antero-polio-myelitis by the intraperitoneal injection of an emulsion of the brain and cord of a fatal human case. The next year Flexner and Lewis succeeded in passing the virus through a series of monkeys, using the intracerebral route.

Flexner and Noguchi cultivated a minute organism from a .15 to .3 microns in diameter from the nervous tissue of human beings and monkeys with acute poliomyelitis, and upon injection of these cultures produced the disease in monkeys, and they believed that they had fulfilled the requirements for proving the specificity of this organism.

Rosenow has isolated an organism which he designates as a pleomorphic streptococcus from material collected from cases occurring in widely separate parts of the country, the organism being found in large numbers in the various lesions of the central nervous system, mesentery glands, tonsil and adenoid tissue. He and his co-workers have proved its ab-

sence in various organs showing no lesions, and on the other hand have used hundreds of animals in proving that this particular organism has an elective affinity for nervous tissue.

He also used hundreds of animals, in determining whether or not various bacteria from different sources had an elective affinity for a nervous tissue, and concluded that bacteria from various sources did not have.

In their studies they found the organisms described by them, as well as the ones described by Flexner, occurring in the same cases, as well as in the same organs, and from experimental data conclude that the globoid organism isolated by Flexner, and the pleomorphic streptococcus isolated by them, were one and the same; that the organism varies in size and shape, depending on the method used in cultivation. Under aerobic conditions, resembling the ordinary green producing streptococcus and under anaerobic conditions becoming smaller in size, filterable, and corresponding to the "globoid" organism of Flexner and Noguchi.

As to the route of infection, it is believed by the majority of observers that the virus passes directly by the perineural lymph spaces through the cribiform plate of the ethmoid directly to the pia arachnoid and adjacent nerve structures.

Flexner and Clark observing that after intranasal inoculation the olfactory lobe might contain the virus, while none was present in the medulla and cord, concluded that the virus passes directly into the nervous system and is not carried by means of the blood stream. On the other hand, considering the fact that the tonsil and adenoid tissue always contain the organism, one might really conclude that, in some cases at least, the infection is carried by the blood stream.

The virus rapidly disappears from the blood stream when injected, being found in the spleen and bone marrow, lymph glands, and posterior spinal nerve roots. The nasal washings contain the virus; it has been demonstrated in cases six days before the onset of symptoms, is usually not found after the tenth day of illness, but has been found in carriers months afterward.

Amoss, in an excellent article, describes the mechanisms of defense against this infection, as follows:

The virus, having been transferred to the nasal mucosa of a second human being, may lodge there, remain active (there are no indications that it multiplies) or it may be destroyed. That the latter may happen is shown by experiments on the neutralization of virus by nasal washing. In general, the nasal washings of healthy adults, but not children, neutralize the virus. This power of the nasal secretions to neutralize may, therefore, be regarded as the first line of defense of the human body against the entrance of the virus. If this were the only line of defense, infection or non-infection would be a relatively simple matter. However, there are other obstacles in the way of the virus, so that if the neutralizing power is absent from the nasal secretions, infection does not always result, but the person on whose nasal mucosa the virus falls becomes a carrier. Flexner, Clark, and Fraser have detected the virus of poliomyelitis in healthy adults who never showed

\* Read before the Harbor Branch of the Los Angeles County Medical Society, November 18, 1923.

signs of infection, and the Swedish observers believe that carriers are quite common.

A third mechanism of a decisive nature is the presence of immune bodies in the serum, as shown by neutralization tests. Anderson and Frost noted the presence of immune bodies in the serum of 66 per cent of the persons who had been in close contact with poliomyelitis cases but who had not contracted the disease.

Whether or not the virus gains access directly from the mucous membrane of the nose to the nervous system, or is carried by the blood stream, it is believed that the protective mechanism of the choroid plexus must be broken down before the virus can cause widespread involvement of the nervous system, and I am forced to conclude, considering the onset and course of a series of cases, that the route of infection is not always the same.

Cases developing a paralysis, before any but the slightest evidence of systemic infection occurs, followed later by severe and intense systemic reaction, producing the so-called dromedary type of case, might well be considered as those in which the infection of the nervous system occurs before general systemic involvement. The following case illustrates this particular type. This little child of eighteen months had had no previous illness, and, while playing with the other children one evening, it was noticed that she limped on her left foot. The mother thought that there might be sand or a wrinkling of her stocking in her shoe to account for this, removed the shoe and found nothing, and did not attach any importance to it at the time. During the night, the child awakened, was rather fretful for a few minutes, apparently did not have any temperature, and in the morning, when she was taken out of the crib by her mother, she was unable to stand because of weakness in the left leg. At this time the rectal temperature was 99 degrees, pulse 90, leucocyte count, 8000; there was loss of all the deep reflexes of the left leg; there was no complaint of pain; there was no tenderness upon movement of the spine; there was no evidence of meningeal involvement upon flexing the chin upon the chest. Within thirty hours there was marked evidence of meningeal irritation, the body was in a typical opisthotonus, temperature 103 degrees, pulse 130, the spinal fluid showing seventy-six cells per ccm., positive globulin, reduced Fehlings, negative to culture. These stormy symptoms persisted for five days, being relieved, temporarily, by lumbar puncture. This child, after being ill for ten days, and her life having been despaired of, recovered, but with a paralysis of moderate severity from the tenth dorsal downward. This child was treated with Rosenow's serum, the first injection a few hours after paralysis was observed.

The above is typical of those cases which develop paralysis, with but little evidence of the presence of a general infection; there being no apparent reaction on the part of the defense mechanisms of the body ordinarily shown by increased temperature, rapid pulse, leucocytosis, etc. In such cases, involvement through the nasal mucosa might be considered as the most probable. Those cases in which the child is

acutely ill for a number of days preceding involvement of the nervous system suggest that the portal of infection is through the tonsil or adenoid tissue, since it is well known that this tissue always harbors the organism which experimentally produces the disease. One might easily reach the conclusion that this mode of entrance is more common than most authors would lead us to believe.

The various clinical forms of the disease are dependent upon the localization and extent of the changes in the nervous system. The pia arachnoid invariably shows a round cell infiltration of varying degree, and the perivascular lymph spaces are infiltrated with the lymphoid cells. The cut section of the cord shows a decided swelling, with small hemorrhagic areas in the region of the anterior horn cells. The degree of destruction of the nerve cells varies from simple swelling to complete degeneration, probably due to a toxic feature in addition to the anemia, edema, and minute hemorrhages constantly present. The posterior spinal root ganglions are involved in the same process, and it is interesting to recall that these structures show changes in experimental animals in which the brain and cord are not involved. The entire lymph glandular system of the body shows hyperplasia, especially the mesenteric glands.

The clinical picture is so varied, depending upon the nervous tissues most involved, that, unless one constantly keeps the classification of Wickman in mind, he is apt to have difficulty in recognizing the clinical manifestations, because we are all influenced by our conception of the disease acquired by observation of a typical case.

Wickman, who has commented upon the abortive form, has described eight definite typical types, which are as follows: (1) Spinal poliomyelitis; (2) the ascending, or Landry's type; (3) the bulbar; (4) the cerebral; (5) ataxic; (6) polyneuritic; (7) meningitic; and (8) abortive. All of which may occur in any epidemic.

To have in mind a clear clinical picture of this disease, one must remember that we have an acute infection, characterized by a toxemia with its accompanying fever and malaise to which, in some instances, are added symptoms suggestive of respiratory and gastro-intestinal involvement. In those cases which go on to paralysis, there is a reaction on the part of the nervous system, depending upon the localization of the infection.

The recognition of the abortive type is of the most importance, from the standpoint both of the treatment of the patient and the protection of the community. It is this type, rather than the one with a frank paralysis, which, if unrecognized, spreads the infection. During epidemics, children who complain of vague symptoms should be isolated for one week, which is considered the incubation period.

Before paralysis has occurred, when only signs of toxemia are present, such as malaise, headache, fever of a moderate degree, with perhaps evidence of a mild respiratory or gastro-intestinal disturbance, one should consider the child carefully, as there are rather distinctive signs which might suggest something more than merely a reaction to teething, a

cold, or gastro-intestinal infection. He is more prostrated than usual, with a relatively slight fever, he voluntarily goes to bed and lies quietly, becomes peevish and irritable when disturbed, and many times assumes a position on his side with knees reflexed and head slightly retracted. There is something about the clinical picture out of the ordinary. If one places the child on its back, or flexes the leg on the thigh, in many cases pain is produced, due to extension of the spine. Spinal tenderness is one of the earliest evidences of involvement of the nervous system, and is often present before evidence of general cerebrospinal involvement occurs. One can readily appreciate the value of this symptom.

Another valuable diagnostic point is evidence of the meningeal involvement as shown by a positive Brudzinkis' sign elicited by flexing the chin on the chest. It is positive in the greater number of cases. A careful examination of the reflexes should be made, as any inequality or any deviation from normal has decided value.

Any suspicion of infantile paralysis should prompt lumbar puncture, as valuable information can be obtained. The fluid is clear, usually under moderate tension, with a cell count rarely exceeding 200. In the majority of cases the globulin is positive, Fehlings solution is reduced, no pellicule forms upon standing, and the colloidal gold reaction is in the syphilitic zone. This latter reaction is very important, as it has been shown by Ragan, in a series of cases, to be constantly present, affording a means of differentiating the fluid of poliomyelitis from that of meningitis and lethargic encephalitis. The fluid shows a reduction in ascending dilutions, starting in the reddish-blue area in 1 to 10, extending into the lilac and purple in 1 to 80, being expressed by 1, 1½, 2, 2, 2, 1, 0, 0, 0, 0. Such a reaction is quite distinctive from that found in meningitis, which is usually expressed as 0, 0, 0, 0, 1, 1, 2, 3, 3, 4, or tubercular meningitis, which is usually 0, 0, 1, 2, 3, 2, 0, 0, 0. He has found that the length of the reaction corresponds clinically to the height of the activity, fading after three or four weeks, and that the reaction does not have any definite relationship to the number of cells or amount of globulin.

The spine symptoms and Brudzinski's sign were of value, in making a diagnosis of the following case:

**Case No. 9**—J. C. This boy was taken ill August 7, 1922, with very severe vomiting, complained of headache; his mother stated that he had a very high temperature. The next day he had a still higher temperature, wanted to be let alone, would not eat, and his mother said that it was very difficult to arouse him. Because of the vomiting, he was treated on this day by a doctor for some gastro-intestinal disturbance. The next day he had a great deal of pain upon flexing the chin upon the chest, was lying in bed with his knees drawn up, and any effort made to straighten out his legs caused a great deal of pain. The knee-jerk could not be elicited. At 10 a. m. on the 9th, which was three days after the onset of the illness, his temperature was 99.6 degrees, pulse 120, and respiration 36. Lumbar puncture showed a clear fluid under pressure, twenty-three cells per cm. m., and a positive globulin. At this time 30 cc. of Rosenow's serum were given intramuscularly. On August 10, he had improved so that he could talk and take some light nourishment; 20 cc. of serum again

administered. The next day there was a little stiffness of the spine remaining, and there was a very weak response of the deep reflexes. He complained of seeing double when he looked upward, and he was very weak. This boy recovered within a few days with a residual sixth nerve involvement. There were no other neurological findings.

Intestinal disturbances, manifested by vomiting and diarrhoea which persists for a number of days, are not unusual, and the following short synopsis illustrates such a case:

This patient was 7 years of age. The symptoms began August 29, 1922, with severe vomiting and diarrhoea; these symptoms lasted for four days, he became much better, and was permitted to be up and dressed. Four days after the onset of the trouble it was noticed by the parents that he staggered and could not control his legs; this became rapidly worse, and in a few hours he was unable to walk. He showed improvement for two days, and then did not feel so well, and was admitted to the hospital September 3 at 2:30 p. m., showing at that time a marked weakness of the right leg with a loss of the k. j. and t. a., Brudzinski's sign was positive, and there was stiffness of the neck. His temperature was normal, his pulse was 90. He objected to being examined. Spinal puncture was done, eighteen cells per c. cm., globulin plus, 14 cc. of Rosenow's serum were administered intramuscularly, and by the next day he was so much improved that he voluntarily flexed his chin upon his chest. Within two weeks the power of his legs was better, and within a few months the child had been restored to normal.

The bulbar type is ordinarily fatal, and the following case illustrates a rather typical case of this type:

**Case No. 2**—S. T., male, age 5, had been in contact with an active case six days before. On August 7, 1922, at 9 p. m., his temperature was 100.5 degrees, rectal; there was no complaint. The following day his temperature and general condition were the same. The patient was seen at 10 a. m.; there was slight tenderness of the muscles of the neck; loss of the knee reflexes; no fever. At this time, 15 cc. Rosenow's serum were administered intramuscularly. At 2 p. m. his temperature was 100 degrees R., at 6 p. m. 100 degrees, and at this time an aphonia had developed so he could not make himself understood. Spinal fluid was negative as far as cell counts was concerned, with a positive globulin; his respiration was 30, he vomited frequently, with marked accumulation of mucus in the throat and larynx, which caused him to gag very often. At 10 p. m. his temperature was 101 degrees R., his respiration 36, pulse 112, there was decided rigidity of the neck, he did not complain of headache, he could not speak, and had difficulty in swallowing; 15 cc. Rosenow's serum were again administered. On August 9, he became gradually worse, the temperature was 104 degrees, there were twitching of the muscles all over the body and slight convulsive movements, 20 cc. of Rosenow's serum again administered. He became rapidly worse and died on August 10 at 1:30 p. m., two and a half days after the onset.

The ataxic type may present some diagnostic difficulties.

**Case No. 24**—J. A., male, age 9. He complained of not feeling well. His mother thought he was bilious and gave him a cathartic. The next morning he had difficulty in dressing himself, the mother chiding him for being so clumsy in using his arms, for he couldn't lace his shoes. She attributed this to the fact that he was probably sleepy, and after dressing him, she helped him to the table, and after preparing his food for him she observed that he could not find his mouth with his fork. She then decided that he was ill, and it was found that he had marked involvement of the

right sixth and seventh nerve, partial involvement of the right eleventh and twelfth. At this time his temperature was 99 degrees, he walked with legs adducted to steady himself, and complained of seeing double. There was marked adiadochocinesis and asynergy. It was impossible for him to hold his head erect, the reflexes of the lower extremities were a trifle active, with a decided Babinski and ankle clonus on the left and none on the right. He did not complain of pain, headaches, nor did he vomit, nor was there any mental change. When he came under my observation two weeks later, spinal puncture showed a normal fluid. Examination of the boy three months after the onset of symptoms showed marked improvement in the involvement of the cranial nerve, he could hold his head erect, and there was nothing noticeable in the use of his legs, but the reflexes of the lower extremities were slightly increased.

The ascending type is of interest, and is ordinarily fatal. The progression of the symptoms is well illustrated by the following:

**Case No. 17**—Male, J. H., age 15. On September 5, 1922, he developed a severe headache, without temperature. On September 6, his headache was treated by a chiropractor, and he was permitted to go to school as usual. On the morning of the 7th, upon getting out of bed, it was found that his left leg was so weak that he could not use it, and he complained of some stiffness in his neck. At 8:30 of this day his temperature was 101 degrees, he showed a marked stiffness of the neck, and a marked weakness of his left leg (most marked below the knee), the k. j. were lost, the t. a. were normal. Forty cc. of Rosenow's serum were administered. On September 9, there was some weakness of his left shoulder, and slight ataxia upon movement of his arm; 40 cc. of Rosenow's serum were administered. Within a few days the acuteness of his illness subsided, leaving him with a well-defined weakness of his left leg.

Rosenow has shown that the serum of horses immunized with aerobic cultures of the pleomorphic streptococcus from both poliomyelitis in man and experimental poliomyelitis in monkeys will develop specific antibodies, agglutins, and complement deviating properties. He has utilized this fact in the production of a serum which, unquestionably, is of value in the treatment of these cases. During the epidemic of 1916, in Yellowstone County, Montana, I observed twenty-four cases, eighteen of which were treated with this serum. In this series of cases there was one death. The number of cases recovering with paralysis was eight, or 47 per cent, and the number of cases recovering without paralysis was 9, or 52 per cent. Of the eight cases paralyzed, five were moderately severe, and three were very mild.

When one considers that in various epidemics the general mortality rate is 25 per cent, but in this series only one death occurred, he must conclude either that the administration of Rosenow's serum was of value, or that the disease was unusually mild. However, during the same year in the same state, the State Epidemiologist, in tabulating cases, reported a death rate of 40 per cent in those cases with paralysis in which Rosenow's serum was not used.

The dose of serum is, roughly speaking, 5 cc. to 10 cc. for each 5 to 10 years of age, depending upon the urgency of symptoms, and it should be repeated in twelve, eighteen, or twenty-four hours, depending upon the urgency of the symptoms, and if there is no fall in temperature within twelve hours after the first injection. Rosenow formerly

advised intravenous injection in conjunction with intramuscular injection, but now his advice is that the serum be given intramuscularly.

Generally speaking, one might look for a decided improvement within eighteen hours following the injection of serum, though it usually requires two to three injections before the temperature is reduced to normal. If a child has had asthma or horse serum previously, one should determine by minute injections if there is any degree of hypersensitiveness present. I have never seen any immediate reaction resulting from its use, but in about 50 per cent of cases, serum sickness will develop in eight or nine days, is often severe, and ordinarily can be relieved promptly by the injection of adrenalin chloride.

Rosenow has treated a series of patients with this serum. Of 60 treated in the pre-paralytic stage, all completely recovered without residual paralysis. In a second group of 61, with slight paralysis at the time of treatment, all but one recovered completely. In a third group showing advanced paralysis, 18 out of 123 died, 30 had residual paralysis, 61 recovered completely, and in 14 the late results were not known. In the 259 cases reported by Rosenow, the mortality rate was 7.3 per cent, which is a favorable comparison with the usual death rate of from 22 to 27 per cent.

A recent article by Aycock and Amoss, utilizing the observations of Weed and co-workers that the intravenous injection of hypertonic sodium chloride solution in normal animals caused a reduction in the volume of brain and cord, with a marked reduction of cerebrospinal fluid pressure and an aspiration of fluid from subarachnoid spaces into the perivascular spaces of the brain and cord, have recently reported a case in which this fact was utilized in conjunction with the giving of convalescent serum, with apparently excellent results. Any method which facilitates the passing of serum from the blood stream through the chloride plexus into the subdural spaces certainly might well be considered of value in the treatment of this disease.

#### GENERAL MANAGEMENT

In the acute stage, in addition to the serum treatment, everything possible must be done for the child to prevent restlessness and irritability. The child should be at complete rest until all pain has disappeared, and every precaution taken to prevent muscular contractions. I am convinced that the only way to place the paralyzed muscles at absolute rest is by the use of the cast. Every child following its acute illness should be placed in the care of a competent orthopedic surgeon.

In every case, numerous questions are always asked. Will my child die? Will my child have paralysis? Will the paralysis be marked? Will it recover from the paralysis, and will there be any shortening of the leg? It is very difficult to answer the first question within three or four days, inasmuch as the mortality rate in certain epidemics has been 27 per cent. One must necessarily be rather cautious in making a positive statement. As to whether or not the paralysis will be marked cannot be determined in an individual case until a sufficient time has elapsed to permit one to judge. As

to whether the child will recover from its paralysis depends entirely upon the degree of loss of function, but as we know that every child who receives intelligent treatment following paralysis will show a great deal of improvement during the following year. As to whether or not there will be shortening of the leg, one might conclude, after reading the observations of Nathan, that unless the gastrocnemius is involved, the shortening of the limb will not occur. He has found that in seventy cases, five years after the onset of the paralysis, all children with shortening had gastrocnemius involvement alone or in association with the tibialpsocticus.

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#### DISCUSSION

**Cleon C. Mason, M. D.** (219 East Tenth Street, Long Beach, Calif.)—It is with great pleasure that I make these few remarks on Dr. Clarke's paper. I was present when it was originally read, and can testify as to its reception.

As Dr. Clarke has pointed out, the first essential in the handling of the disease is a diagnosis. In the presence of an epidemic this is comparatively easy, but when isolated cases spring up, often out of season, and manifesting rather bizarre symptoms, it becomes almost impossible to arrive at a correct diagnosis until paralysis sets in. Two very valuable points in the early diagnosis were brought out; both I have found of the greatest value. First, the child seems much sicker than the physical findings would warrant, and second, the presence of a positive Brudzinski sign. This last, in the cases I have seen, is most constantly present, and usually absent in other acute meningeal conditions. A third, quite constant finding is a persistent diarrhoea in the presence of an acute gastro-intestinal upset. Certainly, finding all three would be strong evidence in favor of poliomyelitis.

I feel it is still too early to draw any definite conclusions regarding the value of Rosenow's serum. There is considerable evidence, which seems to indicate that the pleomorphic streptococci described by Flexner, Amoss, Noguchi, Rosenow, etc., are not primarily the cause of the disease, but are secondary invaders; especially the work of Bull seems to sustain this view. This should in nowise detract from the work now in progress. Dr. Clarke's figures are very convincing, especially when one bears in mind that, where not used, the mortality rate was close to that of the 1916 epidemic. Certainly, the serum should be given a thorough trial with carefully controlled cases.

**Ellis Jones, M. D.** (Medical Office Building, Los Angeles)—Dr. Clarke has most admirably covered the subject of poliomyelitis from the standpoint of the internist. The treatment of the acute phase, as he has indicated, should consist of rest and absence of irritation and the avoidance of meddling therapeutics.

Fixation of the neck, trunk, and limbs in a well-padded plaster of paris bed, is desirable in the most acute cases. There is no evidence that drugs are of any use, and nothing is to be expected from counter-irritation, electricity, heat, or hot or cold applications. Hexamethylenamin may delay infection in monkeys, but is no use after actual infection has occurred.

During the acute stage, immersion in a warm bath is agreeable; massage and muscular exercise during the acute process is not good physiology, since it irritates peripheral ends of nerves connected with hemorrhagic nerve centers. Rest is imperative to enable the damaged cord to repair without interference, and rest to the muscles is equally imperative to prevent stretching of paralyzed or paretic muscle groups and contractures of the non-paralyzed muscles.

It is extremely trying to the parents, and even to

the experienced surgeon, to apparently do nothing else but restrict motion and prevent contractures during the stage of tenderness, but surgical impatience during this stage is disastrous.

It is routine with us to employ plaster fixation as soon as the diagnosis is established, in order to prevent deformity and muscle-stretching. Flexion deformities of the knees, of the hips, drop-foot, adduction contractures at the shoulder and lateral curvature of the spine are most efficiently prevented by the early employment of adequate plaster fixation.

The convalescent phase begins with the disappearance of tenderness, and during this period muscle-training is begun. It is not sufficient to delegate the re-education of damaged muscles to a nurse or an untrained parent. Muscle-training requires the technique of an expert and constant orthopaedic supervision. Fatigue and muscle-stretching will convert a partial paralysis into a total paralysis, and the disregard of proper muscular balance will perpetuate a lateral curvature.

Ambulatory activity is made possible by carefully fitted braces. With the use of apparatus, almost every paralytic can be made to walk. Orthopaedic surgery enables most of our patients to eventually discard all forms of braces.

If early treatment is adequate, deformities will not occur, and much of the surgery of the orthopaedic surgeon be made unnecessary.

**Philip H. Pierson, M. D.** (Physicians Building, San Francisco)—This paper has been of considerable interest to me, in that it has given a comprehensive view of the diagnosis, prognosis, and treatment of a disease which generally is seen by a pediatrician, neurologist, or orthopaedic surgeon, but which should be at least recognized by the general clinician. It is strikingly evident what a paucity of pathognomonic signs there are in many of the groups, and how the symptoms present might be construed as due to an irritable disposition on the part of the child. The value of a careful routine examination in all such children is rewarded by an early correct diagnosis, the most significant signs being the positive Brudzinski and the diminished or absent knee-jerks.

The treatment by Rosenow's serum has met with sufficiently satisfactory results to warrant its more general use; but it is essential that those using it record the effects produced by the amount of serum used. It seems that a larger dose applied early would be more beneficial. Small doses of diphtheria antitoxin were originally used, but later much larger amounts produced the desired neutralizing effect, and if a superfluous amount was used it did no harm.

Dr. Clarke is to be congratulated on the clear presentation of this subject and the success he has encountered.

**Heredity and Hypertension**—James P. O'Hare, William G. Walker, and M. C. Vickers, Boston (Journal A. M. A., July 5, 1924), analyzed the family histories of 300 unselected cases of permanent hypertension. In 204, or 68 per cent of this group, there was a definite history of apoplexy, heart disease, nephritis, arteriosclerosis or diabetes in one or more members of the patient's family. The number of relatives with vascular disease averaged 2.5 per patient, with the minimum one and the maximum nine. The large bulk of the relatives that had vascular disease, had heart, cerebral or kidney disease. The authors feel that these cases demonstrate rather conclusively that a family history of heart, kidney, cerebral disease, etc., is almost twice as common in a patient with hypertension as in the ordinary patient who has no increased blood pressure. Nature very frequently sounds a warning as early as the second decade in life of the possible development of hypertensive disease in the fourth or fifth decade. Such symptoms include frequent epistaxis, abnormal flowing at menstruation, migraine, cold, sweaty and cyanotic hands, flushing, blushing, extreme sensitiveness, a high-strung and nervous temperament, etc.

## INFLUENCE OF MEDICAL WORK IN OBSTETRICS \*

By ARMSTRONG TAYLOR, M. D., San Francisco

### SUMMARY

- Prenatal care of the mother.
- Influence of social service in obstetrics.
- Establishment in every community of a prenatal hygienic service.
- Duties of a medical social service in relation to obstetrics.
- More attention given to the teaching of obstetrics in our medical schools.
- Maternal mortality of childbirth.

If the report made in the recent survey of the hospitals and health agencies is correct, namely, that no other large city shows as large a proportion of all maternity cases cared for in hospitals as in the city of San Francisco, and at the same time reports a comparatively large maternal death rate, we would naturally conclude that the present prenatal care is not given the attention it should be given by those interested in obstetrics.

In the clinics of the various hospitals, the prenatal work, considering the inadequate funds and facilities to carry on the work, is well done; and the prenatal care of the patient by obstetricians has been markedly improved. However, mothers delivered by the general practitioner in many cases receive very little prenatal care. This is not entirely the fault of the physician, but due to ignorance and prejudice relative to education in prenatal training on the part of the mother, this patient usually coming to the physician at the eleventh hour for delivery.

A great deal of time and patience will be required to accomplish much in education and prenatal care of the patients. Eventually, the medical social service, with adequate funds and the necessary facilities, will be the outstanding agency to bring the prenatal care of the mother to a position which will give her the care which she is entitled to and which she has the right to demand.

So much has been written in recent years on prenatal care that it would seem that there is little to be presented on the subject; however, the fact that it has been so continuously discussed by the profession and so much effort put forth by the various clinics and the medical social service workers to prepare the expectant mother for the oncoming labor, proves conclusively that the pregnant mother is not receiving the care and attention generally that is her just due.

No subject has received as little consideration from the public and medical profession as the prenatal care of the mother.

Statistics in the United States, although we must admit that the registration of births is incomplete, places the maternal mortality at 10,000 annually; with complete statistics it would probably reach the astounding figures of 15,000 annually.

To what can this large mortality be ascribed?

To the inefficient obstetrical training of physi-

cians—many beginning the practice of medicine with an obstetrical training sufficient only to care for a normal case—is in part responsible for loss of life. But on the other hand, the ignorance and prejudice of the pregnant mother, the entire absence of any knowledge of asepsis on the part of many midwives, many of whom practice without a license, has much to do with maternal mortality.

The erroneous belief carried down through the ages that pregnancy and labor are normal, physiologic conditions, may be the reason for the statement that 90 per cent of pregnant mothers do not receive prenatal care, and only about 10 per cent of all births are conducted by the obstetric specialist.

Since the advent of asepsis, many mothers have been saved from puerperal fever and its consequences. So will adequate prenatal care prevent eclampsia, toxemias of pregnancy, and will relieve many mothers of that mental depression fostered by depressing tales of sorrow and suffering that is frequently told her by gossiping friends.

It is very difficult to interest expectant mothers, particularly among multipara in prenatal care. Education and persistence on the part of the nurse and the obstetrician will in time overcome this prejudice. With primipara, it is a less difficult task; they appreciate the attention given them—in fact, demand it. If the blood pressure is not taken regularly, frequent urine examinations made, the various questions answered, and her fits of depression allayed by advice, you may have occasion to wonder why you are not called at time of delivery.

Many physicians consider it more important to understand the application of forceps or the technique of a Caesarian section than to acquaint themselves with prenatal hygiene.

Through better obstetrical training in our medical schools, more prenatal clinics, more prenatal training in the home, with a follow-up service after delivery, giving the mother the care and advice necessary for her child and herself; only by such concerted action on the part of the various clinics and the social medical service may we hope to check the great loss of life incident to the reproduction of the race.

In the better conducted maternities, and particularly in the private practice of the obstetrician, there has been a marked decrease in the mortality of childbirth. In such institutions today, rarely do we hear of puerperal sepsis or eclampsia.

If the prenatal care given these patients by the obstetrician and our clinics—work which could not be conducted without the aid of the medical school service, which visits patients who are unable to come to the clinics—reduces markedly the maternal mortality, then why, by the concerted action of those interested in obstetrics, can not the present death rate due to childbirth be reduced to a standard equal to that of our well-conducted maternities?

There is no denying the fact that a great deal of progress has been made in the past five years in prenatal care; but the field is large and much work needs to be done. It would seem to me that the obstetrician should be the leader in this movement.

In every community, there should be a prenatal

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hygiene service under the leadership of obstetricians; but the great service to these mothers must be done by the medical social service, with the co-operation of the various health centers.

Prenatal care is fundamentally a matter of education; this education must be imparted to the expectant mothers by the obstetrician and the social medical service, which should be well equipped with nurses, who will visit the homes and give the mother the prenatal and post-natal care which it is her right to demand.

There must be more attention given to the teaching of obstetrics in our medical schools. A study of many of the curriculums in our medical schools reveals the fact that no branch of medical training is receiving as little attention as that of obstetrics.

It is a severe reflection upon obstetrics when we consider the maternal mortality annually in the United States, and that 40 per cent of the infant mortality occurs during the first month of life. With more efficient prenatal and post-natal care, this tremendous loss of life can be materially reduced.

A nationwide campaign in prenatal and post-natal care will not only reduce the maternal and infant mortality, but will be the first and most important step in our child welfare work.

The influence of the social medical service in this work will be of the utmost importance, and the entire responsibility in perfecting the work rests in the hands of the obstetrician and the social medical service.

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#### DISCUSSION

**L. A. Emge** (San Francisco)—Dr. Taylor's paper is very interesting and stimulating. I feel that, while it expresses the general consensus of opinion in regard to prenatal care, it does not offer a solution of the great problem that concerns the influence of medical social work in obstetrics. This type of work, as far as it affects the clinics, is well organized and little needs to be said about its value.

Nevertheless, only 10 per cent of all women are confined by clinics and trained obstetricians. Ninety per cent fall upon the shoulders of the general practitioner, who usually is overburdened with work and often lacks laboratory facilities, or who does not see his patient until she is well in labor.

It is here that the need for medical social work is greatest, and the need will increase as more work is thrown on the general practitioner, which ultimately must come because the continually rising hospital expense makes it more and more prohibitive for patients to be confined in an institution.

There must come a time when a visiting social service workers' association can take over the social and prenatal work of the general practitioner. The impulse for the establishment of such an agency must naturally come from the social workers. It would be perfectly feasible for such workers to take over the prenatal and social interests for a group of general practitioners without interfering to any degree with the practice of these physicians. The expense would be negligible and the value derived from such a service would be incalculable.

Such a move would at once open a vast field for social workers, who, when organized, could overlap their districts, if necessary, or exchange calls where solitary patients would fall in outlying districts covered by other workers.

I repeat that the proposal is feasible, but that it must be offered to the physicians by the social workers themselves.

**Dr. Taylor** (closing)—Dr. Emge, in suggesting the

formation of an association to do the social and prenatal work of the general practitioner, has started a subject that will result in much controversy.

Such an association would work well for clinic patients, but I fear that such a plan would not be feasible for the private patients of the general practitioner. At the present time, the prenatal care of the patients in the various clinics is excellent.

It would seem to me that no one should engage in the practice of obstetrics unless he can devote a great part of his time to prenatal work. In most cases the prenatal care of the mother should be considered of more importance than the delivery of the child.

I agree with Dr. Emge that the didactic work in obstetrics in many schools is sufficient, but the practical application of obstetrics is lacking.

Many of our large clinics, having many patients in attendance, could be used for the practical teaching of obstetrics, but in many cases the available material is not used.

#### SOME OCULAR MANIFESTATIONS OF DISEASE PROCESSES\*

By ALFRED GUMBINER, M. D., Los Angeles

The eye is said to be the mirror of the soul, which, medically interpreted, means that it acts as the medium of expression for the higher cerebral centers. Truly can it be said that the eyes, too, are the milestones of the body's span of life, for they carry, externally, that infallible sign of early decay, the *arcus senilis*, and, internally, the lenticular changes of presbyopia.

Both from an anatomical and biological standpoint, we must consider the eye as being essentially a neurologic organ. Its most important membrane, the retina, is a continuation of the optic nerve. The optic nerve and tracts are continuations of the cerebrum, and are covered by the cerebral membranes—pia, arachnoid, and dura. Between the membranes are lymph spaces such as are present in the brain. Thus is explained the involvement of the optic nerves in cerebral lesions with pressure and exudation. The eyeball is also plentifully supplied with nerve-endings, motor nerves from the base of the brain, sensory nerves from the gasserian ganglion, and sympathetic fibers from the spinal cord. It is very patent, therefore, that the eye, and particularly the pupils and extra ocular muscles, may be specially involved in diseases affecting the central nervous system and spinal cord. I will again refer to this later.

The eye may harbor the most baleful of ocular diseases and yet will exhibit less frequently than many other bodily organs the three cardinal symptoms of inflammation—dolor, rubor, and choler. This is explained by the frequency of an insidious onset in many ocular diseases. The first and only symptom in a majority of these cases to attract attention to the eye is failing vision, and this symptom, unfortunately, is often overlooked or underestimated. To cite an illustrative case: A man, 40 years of age, visited me in the interests of his own business, which was to sell insurance. In the course of conversation he laughingly mentioned that he might at some time consult an oculist professionally; he thought his eyes bothered him some. A third party present at the time proposed that he do

\* Read before the clinical staff meeting of the Kaspere Cohen Hospital, Los Angeles, Calif.

it then. Examination elicited the following: Vision in the right eye reduced to light-perception; vision, left eye, twenty-fortieths. Fundus examination revealed a marked optic atrophy in the right eye, and a progressing atrophy in the left. Except for an appearance of being underweight, this man went about his affairs in apparent good health. He was married, the brother-in-law of a physician, and a man who, from the nature of his calling, was brought into constant contact with physicians; yet he was left to go on toward blindness over a period of years. The subsequent history of the case was short, but sad: A blood Wassermann gave a positive reaction. He was treated, but the shock of the discovery of his condition was so overwhelming that he rapidly developed symptoms of *tabes dorsalis*, and died within six months.

The United States statistics for 1923 show that there are 45,000 totally blind in the country, and it is estimated that thousands more are on the road to blindness.

Industrial commissions and the heads of large private industries here and in England have now awakened to the fact that employes should be as routinely examined for evidence of defective eyesight as is practiced on the young in the public schools. The economic loss due to time lost, owing to uncorrected eyestrain and its attendant neuroses, they found to be enormous.

Almost any of the body organs may directly or indirectly affect the ocular apparatus, but seldom does a primary affection of the eye, except in malignancy, react on its companion organs. The damage in ocular disease is more an economic one.

One of the most deplorable obstacles to ocular hygiene and eyesight conservation is the vanity of girls and women, and some men, who persistently refuse to wear glasses because they will "spoil their looks." I have seen females reach the borderline of almost total blindness because of this foolish prejudice, and let me add that this prejudice is greater the higher the social grade of the patient.

There are many signs which denote ocular trouble, and are easily recognized if looked for. Children who hold their books too close to the eyes probably have latent myopia—a progressive condition if unchecked. Many persons narrow their palpebral fissures on both near and distant vision, which is but an effort to overcome an existing astigmatism. Certain postures of the head, such as a lateral rotation to one side, an inclination toward one shoulder, is indicative of possible muscle imbalance. It is an unconscious effort on the part of the patient to render his visual axes parallel, and so overcome an existing diplopia.

It is in childhood that the greatest oversight is necessary, for many children are born with hereditary stigmata—such as a neurotic temperament, a facial asymmetry, an existing astigmatism, which only require the proper exciting cause, such as invariably comes with the onset of school-life and study, to bring about permanent ocular trouble.

Children are often unjustly blamed for backwardness at school, lack of concentration in their homestudies, when the real cause probably is a visual defect that burdens them with a train of reflex ocular

neuroses. Sometimes it is due to the presence of a fine nebular opacity over the pupils—the result of a tiny ulcer found in children with disorders of malnutrition, hereditary syphilis, infantile tuberculosis, or as a complication of chickenpox or measles.

Quite often we see people, especially those of middle age, who have a peculiar stare in their eyes. We pass it by with the thought that it is due to a type of facial contour. Yet, underlying it, there may be an exophthalmos, an orbital tumor, the widely dilated pupil of high myopia, or a single widely dilated pupil due to nuclear disease, disease of the retina, optic atrophy, chronic glaucoma, or detachment of the retina.

Another symptom often overlooked, and which the patient describes as "seeing a black spot" before his eyes, may be significant of a positive scotoma existing in the patient's field of vision, and may be the first and only sign of a severe retinal or choroidal disease, or a rupture of a retinal artery, or brain pressure from some cause.

Bagley, of Baltimore, recently described the case of a man of 50 who casually complained of not seeing to his right. He was in apparent good health otherwise. He placed no further stress upon the condition until several weeks later, when there occurred a sudden increase of symptoms—the patient rapidly dying of brain abscess. The first symptom to manifest itself in this case was an unrecognized right-sided hemianopia.

Some patients may complain of occasional and transitory attacks of blindness and nausea. These attacks may be perfunctorily attributed to gastric disturbance. Such attacks last but a few seconds or a minute, and are significant aura preceding retinal embolus, and should lead to further examination of the cardio-vascular and renal systems.

About two years ago a man of 55 was referred to me for refraction. His physician advised and permitted him an automobile trip to San Francisco, and sent him to me, first, for glasses. The patient looked very cyanotic, his breathing was labored, and he dropped into a chair with evident relief. I elicited the fact that he had been treated for kidney disease, and occasionally had blinding spells. This valuable symptom, however, seemed to have been lost sight of in the mass of other symptoms of which he complained. Ocular examination showed that he was completely blind in the right eye, with diminished vision in the left. The ophthalmoscopic examination revealed a most extensive retinal hemorrhage in the right eye; also to a lesser extent in the left. Glasses were no good to this man. I immediately returned him to his doctor, with a hopeless prognosis. He lived less than a month. An early ocular examination would have warned the attending physician of his patient's true condition, and resulted more favorably for both.

In 1858 Donders, of Utrecht, wrote his classic work on "The Anomalies of Refraction and Accommodation," and laid the foundation for the present specialty of ophthalmology, but it remained for such accomplished writers and observers as S. Weir Mitchell and William Thompson, of Philadelphia, to more fully bring to the attention of the medical

profession, in several brilliant treatises, the great importance of the close relationship existing between ocular strain and the nervous system. They called it "functional eyestrain," and showed that it was followed by a train of reflex symptoms of varying severity.

These reflex symptoms vary with the individual and the occupation. A sailor or a farmer may suffer from no reflex eye symptoms even in the presence of a high refractive error, whereas the student or the clerk will complain of considerable asthenopia in the presence of small errors. The robust individual is apt to sustain an ocular defect with no symptoms, whereas the thin, nervous sympathetic type of individual will suffer considerably.

The most common of the functional complaints is cephalalgia. It is usually a browache, and is made worse by the use of the eyes. The pain of these headaches may travel into the neck, shoulders, and even into the arms. M. M. Zimmerman, in a study of 2000 cases in private and clinic practice, found that 71 3/10 per cent suffered from headache. Petit chorea in children, and epilepsy, have been found to be due to irregular astigmatism. Insomnia is a frequent complaint of eye sufferers. It is due to an imbalance of the vertical ocular muscles which, in sleep, cause the eye to assume an abnormal position, resulting in a tension or pull that awakens the patient. Various neuralgic head-pains can be attributed to latent eyestrain, and, if the cause remains uncorrected, may hasten the sufferer into a chronic state of invalidism. Vertigo and nausea follow upon uncorrected refractive errors. I have seen and treated successfully a number of patients who were unable to ride in a train or street-car without experiencing vertigo and nausea, and who were permanently relieved by proper refraction. It is necessary to refract these cases under complete cycloplegia. I recall a case I treated in New York City. This man for twenty years was unable to ride in a train without experiencing vertigo and nausea. Born in Russia, he came to this country convinced that his case was hopeless. Although he was over 50, I elected to refract him under atropine, with the result that I was able, by thus relaxing the spasm of accommodation, to fit him with glasses which permanently relieved his condition.

The study of the character and behavior of the pupils should become a routine procedure in any office examination of a patient, for much can be gained to help in the differential diagnosis of certain constitutional diseases at their early onset. A normal pupil is one that responds to light stimulus, accommodation and convergence, and is a distinguishing sign between the presence of a functional and an organic disease. In the former, these reactions are present or exaggerated; in the latter, they are diminished or lost. An eye that is progressing to blindness, or that is already blind, has partly or wholly lost its power to transmit visual impulses to the brain centers. Thus the reflex arc is broken and the pupil fails to contract. An exception to this is found in cases of visual interference where the lesion is situated either in the internal capsule and affects the visual fibers on their way to the cortical visual area, or in lesions of the visual areas them-

selves. In these cases the pupillary light reflexes are not abolished. Thus it becomes a valuable aid in the location of cerebral lesions.

It is important, too, to know something about the muscular excursions of the eye. There may be a limitation of motion due either to paresis or paralysis of one or more of the extra-ocular muscles. There may be a squint which is readily recognized, or by a simple test a hidden paralysis is discovered. This test consists of asking the patient to follow with his eyes only, the head remaining stationary, the surgeon's finger, as he moves it from the middle line of the face, first, in a horizontal and then in a vertical direction. In a paresis or paralysis there will be a limitation of the motion of the globe in the direction of the paralyzed muscle. These patients may complain of diplopia. It is important that this symptom should be recognized early, as, by exercising their strong fusion-sense, these patients readily overcome it, and, thus, its importance as a diagnostic symptom will be overlooked by the physician.

From a diagnostic standpoint the pupils play an important role in tabes dorsalis. In this disease we often find the "Argyll Robertson pupil" antedating the onset of muscular inco-ordination, or the loss of knee-jerk. Such a pupil is occasionally noticed in paresis. Here it is of transitory existence, and disappears and returns, whereas in tabes dorsalis it is a permanent condition. Another diagnostic ocular symptom of tabes is a total ophthalmoplegia in one eye. The pupil is widely dilated and cannot contract to ordinary reflex stimulation. This symptom, plus a paresis of an ocular muscle in the other eye, is strongly indicative of a syphilitic origin, whereas a purely "Argyll Robertson pupil" speaks for a tabetic entity.

In multiple sclerosis an interesting ocular symptom, and one that may precede all the other symptoms of this disease, is the presence of an ocular nystagmus. It is highly pathognomonic when shown not to be the acquisition of early infancy—when internal auditory disease is excluded, and high refractive errors are ruled out. It is not an intentional nystagmus of sudden activity, but is usually noticed on strong lateral rotation either to right or left. This symptom, plus an early ptosis, or plus a persistent inequality of the pupils, with diminished reaction to light and loss of accommodation, is strongly indicative of early multiple sclerosis. Another interesting observation in this disease is the infrequency of third-nerve paralysis—that is a complete ophthalmoplegia, differing from tabes where this sign is of frequent occurrence. On the other hand, paralysis of the sixth or abducent nerve is a more common occurrence in multiple sclerosis.

Paresis is a disease which, in its early stage, is difficult to distinguish from neurasthenia. Dercum, of Philadelphia, lays great stress upon one ocular symptom as very helpful at this time, and that is the existence of a slight amblyopia, especially if accompanied by a diminished color sense. He calls it "an invaluable duplex," antedating many of the other symptoms, even the fundus changes. Another significant ocular sign of paresis is an inequality of the pupils, with sluggish reaction to light, or a loss

of the consensual pupillary reaction. A persistent miosis—that is, a steady contraction of both pupils when taken together with other symptoms of the disease, is also highly significant of paresis.

Friedrichs disease is characterized by a complete absence of ocular phenomena, except one, and that one is a very frequent accompaniment. It is a nystagmus consisting of irregular twitchings, occurring only when the eyes are fixed on a moving object, and is more intense than the type of nystagmus found in multiple sclerosis. Thus, in suspected cases of Friedrichs disease, the absence of all ocular phenomena, or the presence of this type of nystagmus, speaks strongly in its favor.

A word about the functional psychoses. Nothing definitely diagnostic has been found in the behavior of the eyes. The pupils may show any type of contraction or dilatation. In the acute mental diseases the pupils are usually dilated.

In cases of degeneracy, with psychoses, we find the following morphological characteristics, such as unusual narrowness between the eyes, unusually wide palpreal fissures, or unusually narrow palpreal fissures, or the pupils may be abnormally situated. There may be a coloboma of the iris, or patches of iris pigment may be found in large spots, or the condition may be one of total albinism.

I shall not dwell upon the fundus changes found in such diseases as chronic nephritis, diabetes, leukemia, hemorrhagic diathesis, arteriosclerosis, and cardiac conditions, important as they are both in diagnosis and prognosis. My aim in this paper has been rather to emphasize the importance of a knowledge of the behavior of the exterior of the eyes in constitutional conditions, as the signs thus elicited are easily accessible to all. These symptoms, when recognized early, will lead the physician to a readier diagnosis, or bring the patient under the observation of the specialized consultant before serious and irreparable pathological changes have taken place both in the eyes and their companion organs.

Westlake Professional Building.

#### DISCUSSION

**Edward F. Glaser, M.D.** (391 Sutter Street, San Francisco)—This timely paper brings up the importance of accurate observation, the careful study of ocular manifestations and signs, and the value to the general practitioner of applying the conclusions reached by the oculist. More than any other study, ophthalmology demands and proves the value of the search for, the recognition, and consideration of all signs and manifestations.

Systematic observation demonstrates and teaches us much about eyes. The temptation to hurriedly approach the examination of the subjective symptoms most complained of, may cause failure to notice manifestations of ocular troubles which would aid greatly in a fuller and more accurate diagnosis and, therefore, a more helpful and valuable one for the patient and his attending physician.

In starting his paper, Dr. Gumbiner well terms the eye a "neurologic" organ, an organ of special sense, with many nerve connections. He emphasizes the early involvement of the eye in diseases affecting the central nervous system and the spinal cord. And as in these diseases the pathological changes are often first evidenced in the eye, the value of early eye examinations is obvious and is not always appreciated and made use of by the internist.

The problem of the education of the general public to the importance of early recognition of eye manifestations is a very large and complex one. The onset of many ocular diseases is insidious, and ophthalmologists are often astounded at cases of personally unrecognized failing vision even in quite intelligent people. This is being recognized in industrial medicine and, in their physical examinations of candidates for positions, corporations should include some eye examination and record of the visual acuity of each eye, and thereby safeguard both the applicant and themselves. Not infrequently cases come before the Industrial Accident Commission, where some slight injury directs the attention to the eye and defective vision then first noticed, which examination proves must have pre-existed and is now recognized by the sufferer for the first time and honestly attributed by him to the accident.

The importance in child hygiene of thorough, careful, and scientific attention to ocular manifestations cannot be overemphasized, and doctors, nurse, and parents should never belittle ocular signs and symptoms. Early accurate attention in childhood would save much discomfort in after years. This is well evidenced in such a pronounced manifestation as squint and in which the very early proper care and treatment is of such great importance to correct the squint and preserve fusion sense.

In the adult, early ocular examinations would have perhaps helped to save many patients by giving warning to the attending physician of impending dangers. Statements of seeing "black spots" and of transitory attacks of blindness should not be disregarded, but rather as pointing to a consideration of the cardio-vascular and renal systems.

In conclusion, Dr. Gumbiner is to be thanked for giving us his well-taken points, and we should be constantly on the watch for the ocular manifestations.

**G. W. Walker, M.D.** (Fresno, Calif.)—Dr. Gumbiner's paper is most interesting and to the point. The mention of routine examination of eyes of employees suggests the question of who is most interested in procuring these examinations. It seems to me not the employer, particularly, as he must pay ample insurance anyhow, but the insurance company could be protected against paying for alleged injuries where really the eye had been previously injured, or where the eye was a defective eye before the injury. Such examinations would save the insurance company money rather than the employer, so the employer is not the one who would be interested in having these examinations, except to lower rates generally, unless he is carrying his own insurance. The workman himself could profit by such examination by showing, in case of injury, that previously he had had a perfect eye.

Choice of occupation in life should only be made after examination has shown sufficient degree of efficiency and probable durability of the eyes to serve in the task chosen. Parents should know the facts early enough to help the child to choose the proper vocation, and avoid bad results of unwise choice.

As to the reluctance of parents to have their children wear glasses for appearances' sake, I find that easily overcome upon explaining the results of amblyopia from lack of use, of an eye in strabismus, or grave danger to the eyes in uncorrected myopia.

We have to educate the public against the prevalent error that cross-eyed children will "grow out of it." Also, we can explain how much better glasses are usually tolerated, if needed, when begun early enough, and the protection from injury to eyes given by wearing of glasses by being a barrier against traumatism, but arguments are often of no avail toward getting the reluctant adult to wear needed glasses.

Beginning glaucoma can be greatly helped, by way of arrest or improvement, by careful elimination of attendant infections. Great aid can be given our patients by competent internists. All familiar with glaucoma know the great difference in results, when

these patients are under the care of a skilled oculist, or, of one best versed in the selling of glasses.

Dr. Gumbiner's plea for a skillful, careful examination of every case is to be taken seriously.

**Frank R. Dray, M.D.** (2525 Fillmore Street, San Francisco)—The avenues for profitable discussion opened by Dr. Gumbiner are endless, but undoubtedly that of greatest significance and help to us is the plea which his splendid paper makes for thoroughness in examination. This is a point of fundamental importance; indeed, the golden key to successful practice.

Twenty-six years ago, Dr. Frederick C. Shattuck, the wise and much-beloved professor of Clinical Medicine at Harvard Medical School, at the last session of the class of 1898 said that should he, at that last hour, stand continuously shouting the words "be thorough in your physical examination," his time could not be better spent. Thus, in this paper those words are echoed and re-echoed and their import again and again emphasized.

Today we hear much of the increase and spread of the cults. Our journals often picture the spectacle as a growing menace. Charlatans we know ever have been, but their opportunity we ourselves too frequently furnish through neglect of thorough examination.

Dr. Gumbiner covers, in a most comprehensive manner, functional and organic changes pertaining only to the eye. He makes it clear that probably no other organ is affected by so many general pathological conditions. Moreover, what is of inestimable value, how the eye often presents in many cases, the first symptom, the early recognition of which may result in cure or at least arrest of serious disease. It is because of this early eye evidence that every doubtful case seen by the general practitioner should be sent to the oculist, and it is our justification for urging generally regular eye examinations not only among children, but especially in apparently normal adults.

It seems pertinent here to briefly mention two very unusual instances of ocular manifestation. Mrs. S., age 33, is a woman of exceptional intelligence. She has one child, a healthy girl of 11. Family history, negative. Past history includes operation for uterine fixation ten years ago, and one year of mental tension over business difficulties two years ago. During the year of mental stress, she flowed twice a month for four months. Present illness began one year ago, with attacks of transitory dilatation of left pupil associated with pain in left eye, the pain sharp, and shooting through eyeball direct to back of head. These attacks are sometimes ushered in with a sense of nausea. They also are more apt to appear just before or after her periods, which have now been normal for more than one year. In duration they vary from one hour to two or three days. They may occur as often as once a week. Several competent oculists have been unable to discover any evidence of functional change in the eye or ocular apparatus in the interval between attacks or any evidence of organic lesion at any time. A most rigid general examination, including all laboratory tests, reveals nothing but a low blood pressure and slight anemia. No neurological findings.

The ocular manifestations in this case must be due to local ocular vascular crisis or angio-spasm, probably of reflex origin. The phenomena of periodic blindness, muscle cramp, crises in locomotor ataxia, and angina pectoris, although usually seen in the presence of arteriosclerosis, are generally so interpreted, but we also know that vascular crises may occur in normal vessels as is shown by similar vascular phenomena in Raynaud's disease. It will be interesting to watch developments on treatment, this case having been referred for diagnosis but a few days ago.

The other unusual case, a gem to the proctologist, was one of marked ocular muscular imbalance which permanently disappeared after hemorrhoidectomy.

Dr. Gumbiner has certainly given us a worthwhile paper; one in which he has more than realized his anticipations.

**Doctor Gumbiner** (closing)—Dr. Frank R. Dray's citation of his two cases emphasizes my contention of the close interrelation of the various bodily organs with the ocular apparatus. It is as essential for the oculist to enlist the assistance of the internist or surgeon as it is the other way around.

Dr. Walker's experience in finding it difficult to have his adult patients wear their glasses is very true. The public must be educated to look upon glasses as a treatment rather than a mechanical aid to vision only, and a panacea for all refractive ills. Too much is expected from the use of glasses alone when there are contributory causes to be found in general and local neuroses and in congestive states of the retina and adjacent structures. Patients should not be dismissed with a pair of lenses and told to return in a year or two. Patients often outgrow their refraction in a few months. The expense of glasses is a factor to be considered, and some way should be worked out between oculist and manufacturing optician to lighten the burden. Glaucoma is hardly ever recognized in its early incipency by the general practitioner, and only occasionally in the acute types. The possibility of this disease lying latent should be kept in mind.

Dr. Glaser's remarks emphasize what I tried to bring out in my paper—the necessity for careful observation, accurate diagnosis, and close co-operation between all the branches of medicine and surgery. Dr. Glaser will agree with me when I say that a routine examination of the exterior of the eyes and the taking of the visual acuity should become as routine a procedure as taking the pulse and temperature.

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**Are You Treating Syphilitic Patients or Wassermann Reaction?**—"Are we treating the syphilitic or are we treating his 4+? This is the question Dr. Graves asks in the June number of the Journal of the Missouri State Medical Association. We have gotten away from the natural history of syphilis and are concentrating on getting a negative Wassermann through the use of 'specific.' The patient's physical makeup, his inherent resistance, his habits, and his environment—in short, the patient himself is more important than the spirochete. The natural defenses of the body should be stimulated by both the patient and the physician, the former by his way of living, and the latter by not weakening the defenses by over-dosage with specifics. The drugs we use stimulate the body defenses only, and do not act selectively on the organism. The article stimulates thought, especially in these days of 'over laboratoryization' in so many of our methods."—T. H. E. Mastoid, M. D., Bulletin San Diego County Medical Society.

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**An Old Friend in a New Dress**—The dosage of digitalis has always been a problem—for two reasons: physiological and pharmaceutical. And these two are obviously interrelated, for unless a reliably uniform preparation of digitalis is available, how can there be uniformity of dosage, even though there may be agreement as to the physiologic effect aimed at? The profession seems to be partial to the tincture, unless the case is one which demands hypodermic treatment; and of all the tinctures offered, the best is, undeniably, one that is made from select digitalis leaves, standardized by physiologic test, put up in small packages protected from light and air, and, of course, dated so that the physician can tell at a glance how old it is. The reputation of Parke, Davis & Co. is such that what this house has to say about its Tincture No. 111, Digitalis, in our advertising pages, will be found well worthy of careful consideration. Further particulars, if desired, will no doubt be supplied by the manufacturers.

## EPITHELIOMA OF HAND—A STUDY IN DIFFERENTIAL DIAGNOSIS BETWEEN EPITHELIOMA AND ENDOTHELIOMA\*

By W. A. PERKINS, M. D., Berkeley  
(From the Departments of Dermatology and Pathology,  
University of California Medical School)

In October, 1922, a rancher, 61 years old, applied for treatment, complaining of ulcers on his right hand and arm. He said that six years ago he ran a splinter into the back of his right hand and that soon after this a lump appeared at the site of the injury. This lump persisted and broke down, and discharged pus intermittently. More than five years later, about four months ago, after pulling on a rope, red streaks appeared on both arms. Those on the right arm remained, the others soon disappeared. The right hand swelled, and a swelling appeared in the right axilla. The latter was opened and a large amount of foul semi-fluid necrotic material was removed.

One week later the lump on the hand was excised. This was examined at a laboratory and the patient informed that it was not cancer. Ten days later a lump appeared on the anterior aspect of the wrist, and following this other lumps appeared, extending successively up the arm as far as the axilla. Most of these lumps eventually broke down and discharged.

When the patient came to me he presented a most remarkable picture. On the back of the right hand was an ulcerated nodule  $2\frac{1}{2} \times 4\frac{1}{2}$  cm., undoubtedly a recurrent lesion at the site of the original injury. On either side of this were scars, the result of the old excision. Proceeding now mesially around the wrist and extending directly upward on the flexor surface of the arm was a striking series of similar nodules. These were of different ages and sizes, ranging from  $\frac{3}{4}$  to  $3\frac{1}{2}$  cm. in diameter. All but one or two were quite definitely ulcerated. When close together the nodules tended to coalesce into a single large area with raised irregular borders and ragged excavated center. Two such areas were present at the wrist and in the axilla, measuring  $7\frac{1}{2} \times 14\frac{1}{2}$  cm. and  $4\frac{1}{2} \times 9\frac{1}{2}$  cm., respectively. Where discrete the nodules appeared typically as bluntly acuminate swellings marked by thick rounded borders and sharp crater-like centers. At times two neighboring lesions were joined by a narrow subcutaneous passage. A distinctive clinical feature observed was the outpouring of an abundant pale watery turbid fluid from all of the open lesions. Associated with the above was a marked diffuse swelling of both the hand and arm to about twice normal size.

Such was the gross picture, and the first point to be settled was that of diagnosis. With the history as outlined above, some form of infection was quite naturally suspected. Cultures were made from the lesions; the discharge examined for coccidioidiosis, actinomycosis, sporotrichosis, and oidiomycosis. The ulcer borders were biopsied and frozen sections prepared. The bacteriological studies were negative. Smears of the discharge from several of the lesions were also negative. The frozen sections, however, yielded a clue, for they showed a form of new-growth. This from the first appeared unusual. That it was malignant was obvious, but just what

type the cells might be could not be determined so readily. Owing, however, to the presence of certain marked characteristics to be described later the diag-

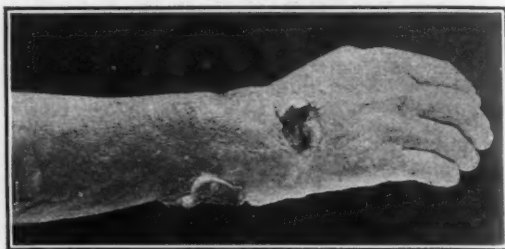


Fig. 1—Showing the recurrent ulcerated nodule on the back of the hand at the site of the original lesion.



Fig. 2—Showing the general distribution of the lesions up the front of the arm, with the large coalescent areas at the wrist and axilla.



Fig. 3—Showing both discrete and conglomerate lesions with the gross characteristics of each; note the crater-like centers.

\* Presented to Section on Dermatology at annual meeting of A. M. A., San Francisco.

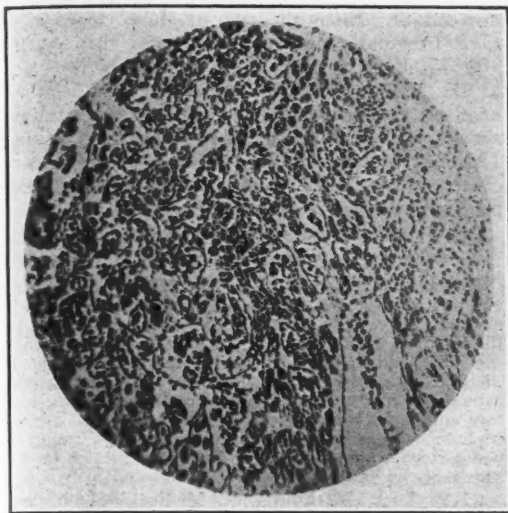


Fig. 4—Showing the peculiar cell-lined spaces, also the arrangement of tumor cells between the spaces.

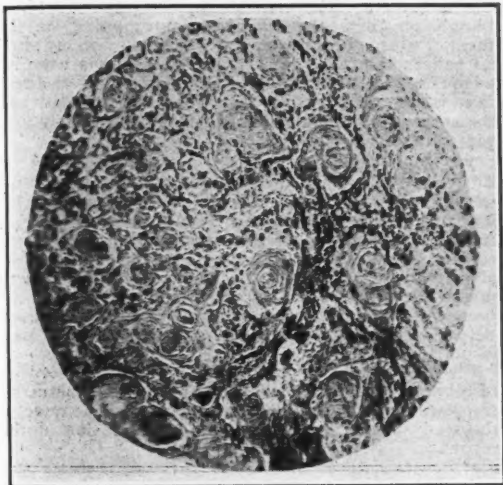


Fig. 5—Showing the cell whorls.

nosis of endothelioma was strongly suggested, and such a diagnosis was tentatively rendered.

The patient was in fair general condition, the tumor apparently limited to the arm, and the chance for cure at least possible. A shoulder-girdle amputation was therefore performed. The man made a good recovery, suffered no complications, and left the hospital two months later in excellent physical condition.

Further studies were made of the lesions. Grossly the tissue was firm and semi-elastic, and on section homogeneous, gray-white and succulent.

Microscopically the sections showed an extensive tumor invasion. This involved primarily the corium and adjacent subcutaneous tissue. From thence it extended upward to invade the overlying epithelium. The general appearance of the growth presented two noteworthy features. The first was the presence of numerous clear-cut spaces, easily seen, and of various

shapes and sizes. Some were large and round or oval, others were mere branching crevices. All were lined by a continuous layer of tumor cells. Of these some were large and plump, others bore a triangular appearance with the point projecting into the lumen; while yet others were flatter in outline, though still showing a bulging free surface. Not infrequently all three varieties were intermingled together in the same space, irregularly alternating. The lumina themselves were varied; some were entirely empty, others were filled with the tumor cells, and still others were only partly filled. In the last the cells lay either entirely free or piled up at one end as though proliferated from the adjacent underlying tumor cells. Nothing suggestive of an endothelial lining could be made out external to the tumor cells. In none of the spaces was blood seen.

Between the spaces were other tumor cells vari-

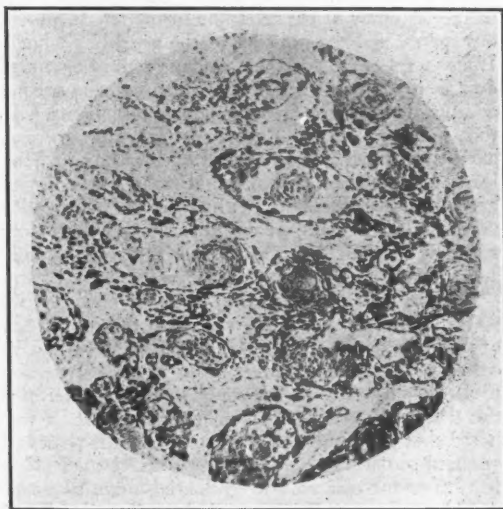


Fig. 6—Another view of the whorls, showing them inside as well as outside the spaces.

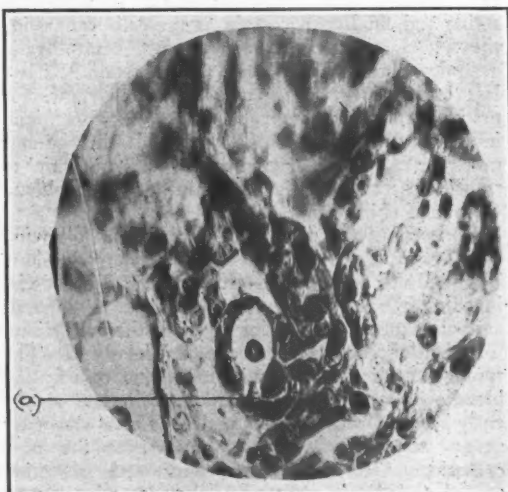


Fig. 7—A high power view of the tumor cells, showing the "prickles" (a) and the nucleoli.

ously arranged, sometimes in long branching columns, again in small rounded or oval areas, and still again in larger sheet-like masses. Some of the columns showed fissures, suggesting lumen formation.

The second striking characteristic was the presence of large numbers of sharply outlined rounded bodies resembling epithelial "pearls." These were composed of tumor cells compactly arranged in concentric whorls, and were irregularly distributed throughout the growth, occurring about equally within and outside the spaces.

The tumor cells themselves were fairly uniform in size with an abundant pale staining cytoplasm, finely reticulated and sharply outlined, and with nuclei that were large and vesicular and supplied with only a small amount of chromatin. Mitotic figures were numerous.

Up to this point the description might very well apply to the tentative diagnosis, endothelioma, due to the histology of the cells, the formation of numerous spaces, and the presence of the pearl-like whorls. If also we were to add the abundant watery discharge described we might be justified in going even further and using the term lymphangio-endothelioma. In this, however, it seems not impossible that we may have been somewhat influenced by recalling in Mallory's Principles of Pathologic Histology a cavernous haemangio-endothelioma with a lesion distribution very similar to that just described. And then more recently Busman described a case that both grossly and microscopically very closely resembles our own.

Despite such confirmatory evidences, however, we were not yet definitely assured as to the correctness of our diagnosis. Recourse, therefore, was had to certain differential stains and to further attention to detail. By these means we were able to determine the three following additional points: First, it was noted that practically all of the tumor cells possessed one and sometimes two or three distinct nucleoli, a feature more common to epithelial than to endothelial cells; secondly, some of the cells were found to have a quite definite border of very fine protoplasmic projections or "prickles," demonstrated by the Mallory acid phosphotungstic haematoxylin stain; and finally, in certain of the cells composing the whorls there were seen distinct kerato-hyalin granules, shown best by the Gram's stain. These last two points were particularly important, for prickle cells and keratohyalin granules are not found in endothelial structures (Ewing). It thus became necessary to reconsider our previous diagnosis and to transfer the tumor from the group of endothelioma to that of epithelioma.

Concerning the method of spread, the following may be stated: The extension was relatively slow. The nodules were all external to the deep fascia, invading the corium and subcutaneous tissue first, and subsequently ulcerating through the epithelium. The axillary nodes were definitely involved. The tumor was growing within numerous thin-walled bloodless spaces in which endothelium had apparently been replaced by tumor cells. There was never at any time any hemorrhage from even the most extensively ulcerated of the lesions. All of which tended to indicate a spread of the tumor by way of the lymphatics.

The later history of the patient can be briefly

disposed of. From the two or three communications irregularly received we learned that shortly after his discharge from the hospital there developed at the site of the wound first one nodule, then another; that the man continued to lose ground slowly, but steadily; and that at the last writing (May, 1923) he was in the hands of a sure-cure cancer doctor in Oklahoma, undergoing a plaster-poultice method of treatment.

3135 Webster Street.

#### DISCUSSION

**Howard Morrow, M. D.** (380 Post Street, San Francisco)—In my experience the condition was a clinical entity. The great number of ulcers limited to the hand, forearm and arm, the profuse weeping from the individual ulcers, the lack of dense infiltration in the borders of the ulcers, and the absence of systemic growths, were conditions which made the clinical picture unique. It was difficult further to eliminate sporotrichosis clinically. The differentiation of endothelioma from an atypical carcinoma must remain in the hands of the pathologist.

**G. Y. Rusk, M. D.** (U. C. Medical School, San Francisco)—Through the courtesy of Dr. Morrow I had an opportunity to see the case clinically as well as to follow Dr. Perkins' careful and thorough study of the growth. The distribution along the superficial lymphatics, with the numerous outcroppings in the form of weeping ulcers, strongly suggested to my mind an endothelioma. The early frozen sections were inadequate to make a differential diagnosis. The direction which the investigation took, the findings, and the reasons for the ultimate diagnosis are clearly presented in Dr. Perkins' paper.

**W. A. Perkins, M. D.**—The laboratory report on the tissue from the original nodule removed four months ago was "not cancer." We regret that this work was done so far away (in Arizona), precluding further investigation of that point. Had the patient remained longer in the hospital it is possible that suitable treatment of the local recurrences of the growth might have resulted in a complete eradication of the tumor. One or two x-ray treatments had been given before discharge of the patient, but these proved insufficient.

I wish to thank Doctor Morrow for the privilege of reporting this case, and Doctor Rusk for the many suggestions and valuable assistance which he gave in the study of the material and the preparation of the report.

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**A Non-Elastic Faith.**—"The Christian Science Monitor expresses hot indignation at measures that have checked foot and mouth disease in California," says Colorado Medicine.

"Los Angeles," it says, "and a considerable portion of the country thereabouts, have been subjected for the last few weeks to an extraordinary manifestation of the results of hysteria caused by medical superstition and medical domination. Because of an alleged epidemic of what is called foot-and-mouth disease among the cattle in adjacent regions, the veterinarians and the health boards of that section have been assuming powers hitherto unknown to the most notorious autocrats of history."

"The Monitor should be more tolerant. It cannot expect animals with foot and mouth disease to read Science and Health, and it can scarcely hope to convince them that there is no such thing as disease. Why not, then, fashion the faith a little, and persuade Christian Scientists that there is no such thing as quarantine?"

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"Efficient government is not the result of a shifting series of political expedients, nor can free institutions be permanently maintained without rigid adherence to certain basic truths."—J. H. Beal, *The Force Behind the Law*.

## MODERN MEDICINE AND THE PUBLIC ATTITUDE \*

By ROBERT WILLIAM LANGLEY, M. D., Los Angeles

The modern relationship between the patient and the doctor is a subject of interest and has been the topic of much discussion. Many feel that this relationship has been undergoing a change during the last few years wherein a spirit of doubt and dissatisfaction often arises, and without sufficient cause. The reason for this apparent lack of confidence is a problem worthy of the close attention of the medical profession itself, for it causes patients to shop hither and thither among quacks and advertising specialists of every description. That it is not being given sufficient attention by the profession as a whole, is probably one of the reasons for the existence of these conditions.

Men of the medical profession have trained their minds to weigh carefully every new development in the scientific world in order that their patients may have the benefit of the gains made in therapy, but have not given sufficient attention to protecting the patient from the wiles of the scheming charlatan. Much has been accomplished in fifty years, and every year the tireless laboratory workers and other physicians lengthen the span of human existence. Many laboratories, research and clinic groups, are constantly contributing to our scientific knowledge of medicine, and some diseases are rapidly being eradicated from the face of the earth. Worthy philanthropists have contributed large sums for these purposes and for the betterment of medical schools and hospitals, which have been of vast importance, in the training of better doctors. The triumphant work of Banting and Best and their co-workers in the discovery of insulin is without a precedent in fifty years. There are thousands of other men in the medical profession giving their lives, their skill, and their money in the same scientific spirit. They accomplish much, and we must ask why quackery flourishes in the light of such facts. One is forced to wonder who has been the more talked of—the late Abrams and his followers with their quackery, or men of the scientific spirit of Banting and Best, who give to the world freely the results of their years of work.

## REASONS FOR EXISTING CONDITIONS

Some are prone to blame the medical profession entirely for this existing lack of confidence, while others find their excuse in the more critical modern attitude of the layman.

People as a whole fail to realize that the science of medicine is not a definite and fixed one, but that it is a constantly changing progressive study with a great deal yet to be learned. Existing in a world built of concrete facts and cock-sure statements, the average person is, because of his environment, inclined to favor the medical man who will guarantee a cure and prove his assertions by a process of alleged reasoning that will appear to the untrained mind as logical—not a difficult procedure. By this method of demonstrating absolute cures and acquir-

ing the testimony of neurotic and deluded patients who believe themselves cured of imaginary ills, much, in an advertising way, is accomplished, and hence quackery flourishes and probably will flourish unless combated by some means as powerful as that used to induce the condition.

Probably one very important factor responsible for the existing conditions is the modern tendency to highly specialized medicine. In this type of work we often lose that close contact which is so essential with many sick people. They need not only the science, but also the art of medicine and the humanity of medicine to help cure them. There should always be a goodly mixture of art and humanity combined with the science. The art of medicine combines a proper understanding of the mental processes involved in each case with a kind, yet firm, treatment of the patient. Many need the physician's personality—not so much his drugs. Christian Science and other sects sometimes supply that personality and in some neurotic patients obtain apparent results for apparent conditions. Medical specialists are prone to send patients hither and thither, thus losing essential touch with the patient, and also losing his confidence. In this manner, machine-made medicine is produced.

The lack of a fundamental understanding of the principles of biology has much to do with the present state of affairs. Even the modern high school and college graduate often has not been taught the elemental subjects so essential to an understanding of the human structure. Charlatans may set up claims and guarantee cures, and when the patient asks us why we cannot do likewise we find ourselves unable to refute such claims because of the lack of a common language in which to discuss the subject. Whenever a supposed cure has been played up to the public by every known means of advertising, it is almost axiomatic that its value is nil. A remedy of merit needs very little advertising and is very willingly added to the therapeutic armamentarium.

## THE INFLUENCE OF EDUCATION

Probably the keynote to the solution of the problem was emphasized by Dr. Ray Lyman Wilbur in his presidential address before the A. M. A. at the annual convention in San Francisco last June. He urges a more extensive and thorough teaching of biology in the public schools. To educate the boy and girl far enough along these lines to be able to understand the cause, effect, and possibility of cure of disease is most certainly of unquestioned value. When this suggestion is more thoroughly carried out, medical problems can be more intelligently discussed with the friends and relatives of patients by the doctor. Then, step by step, all that has happened and all that can be expected to happen and what is being done can be explained and understood. A frank discussion of the extent and nature of a malady with the relatives of a sick one is always appreciated and may often add moral support where otherwise the doctor may be under constant criticism, and without just cause. These discussions must be understood and must be convincing.

Education is the best advertising medium we have. Huxley once said, "A little knowledge is a dan-

\* Read before the Innominate Society of Los Angeles, April 9, 1924.

gerous thing, drink deep or taste not the Perian spring." We know how true this can be when applied to medical discussions. Properly censored news items in papers and magazines, however, may be of great value. Herein rests a vast responsibility upon the shoulders of editors, in sifting the chaff from the wheat. Close co-operation between physicians and newspaper men can thus aid materially in the cause of better health. Many newspapers refuse to accept quack advertisements, and even quack syndicated propaganda, in so far as they appreciate its purposes. There are some editors and publishers, however, who excuse themselves for utilizing unwise publicity with the statement that it helps their circulation, and, therefore, it must be what the people want.

The real value of health publications, such as California physicians have been promoting in *Better Health* magazine and *Better Health* newspaper services for many years, and which the A. M. A. has now taken up through the publication of *Hygea*, can hardly be overestimated. Thorough, carefully prepared publicity should be given about all advances made in medical research.

The public is very slow to grasp the ideas of preventive medicine, and knows very little as to how much can be accomplished toward, not only curing diseases, but also in limiting or preventing them. The efforts and achievements of sanitary engineers, health commissions, and kindred institutions should become a matter of common knowledge among the public. People should be made to understand and appreciate how readily the medical profession accepts and uses curative agents of established merit, and how zealous the leaders of medicine are for stamping out and controlling disease.

#### THE PHYSICIAN'S OWN INFLUENCE

Much of the problem of creating an enlightened public opinion about health, of course, will rest with the individual physician. His own ability and conduct can be of far-reaching and lasting value. Only men and women constitutionally and temperamentally suitable should consider the profession of medicine, whether preventive or curative, for their life work. Others will fail and bring more or less discredit to themselves and to the profession. In talking to the patient, the patient must realize that the physician is vitally interested in his (the patient's) welfare, and is anxious to see him get well. This attitude constitutes "selling oneself" in medicine and should be devoid of any conscious effort on the part of the physician. If money is the greatest goal in the young student's life, he will attain greater success in some other field. With ordinary business acumen, no physician will starve; neither will he become rich from the practice of medicine. With an equal amount of time, effort, and ability, a greater yield in financial prosperity should be and undoubtedly will be found in the business world.

#### SUMMARY

When quackery is sufficiently exposed to the light of the principles upon which the profession of medicine is founded and upon which it is conducted, it will become a problem of minor importance. This

can be accomplished by a more thorough teaching of the fundamentals of biology in the public schools; by the education of all persons through health publications, properly censored news items, and magazine articles; by extensive propaganda covering all work done along the lines of preventive medicine and better health; and by the influence of each individual physician in living strictly to the principles which have kept the profession on that high plane which makes it an honored work.

1052 West Sixth Street.

#### DISCUSSION

**J. Mark Lacey** (1052 West Sixth Street, Los Angeles)—Dr. Langley has treated this subject well indeed, showing that he has given it time and thought.

Problems involving the social, economic, and educational side of the practice of medicine are presented each day, and these problems must be faced and worked out. If we neglect them, we fail in our duty. With the immediate business of practicing our profession, we get into a rut of allowing the future to care for itself, and, in fact, very few busy practitioners have time or thought for much else.

Dr. Langley has pointed out very clearly the fact that the fundamental basis whereby the charlatan may be disarmed and the practice of medicine brought to a higher level, is by means of education of the laity, and this can only primarily be successfully accomplished by proper teaching in the public schools of those subjects which deal with the underlying principles of biology and physiology. One is astounded, in glancing over the curriculum of schools, by the fact that these subjects are either absent or optional.

The efforts to obtain properly censored news items, relative to the progress which is constantly being made in clinical and scientific research for publication in the various health journals throughout the country, is indeed a step in the right direction and cannot help but bring forth fruits in time.

The work of standardization of hospitals has been the means also of impressing upon the doctor himself that better work must be done and in itself is having its effect upon the public in general. It has in a measure brought about the separation of politics from the operation of these institutions which has in the past played a very important role.

The author is to be congratulated on this timely and well-handled paper.

**Paul B. Roen, M.D.** (6422 Hollywood Boulevard, Los Angeles)—The increasing number of papers in our magazines shows that the regular physician is at last awaking to the fact that something must be done to protect the public against the growth of the cults.

We have been so interested in the scientific side of medicine and specialization that personal touch has been lost with the patient.

In the past when the profession has gone to extremes, the reaction of the public has been the support of some form of irregular practice. For instance, overdrugging with shotgun prescriptions and reckless surgery gave rise to manual therapy and bloodless surgery, as expressed in osteopathy. Although the mental side of the sick has been recognized as long as there have been physicians, yet no adequate means were formulated to combat this important phase of illness. Hence, the public turned to Christian Science.

Cults and faith cures have always existed and will until the time when medical science can cope with all mental and physical ailments with which the human race is afflicted. Until that time, and may it not be far distant, the only remedy of the existing evils is, as Dr. Langley has shown in his admirable paper, in the education of the public. Quackery thrives on ignorance. To argue with the public on the merits or demerits of any existing systems of

treatment of the sick is merely advertising them, which is what they want. The public is too ignorant of the fundamentals of the science to grasp the meaning. Therefore, education of the public is of prime importance, and this can be accomplished in the ways Dr. Langley has suggested: in public schools, the press, and by the individual doctor. Pressure should be brought to introduce into the schools the proper studies, and more publicity should be given to the press in an interesting and proper manner. Each one of us as physicians should take it upon ourselves to instruct our patients. All we ask of our patient now is blind faith, and blind faith is not characteristic of this age. People want to be treated as reasoning human beings. They feel it is their right to know the why and wherefore of their condition. A little time in explanation is well spent in the education of the public.

### DISTURBED METABOLISM AS A BACKGROUND FOR DISEASE

By LOVELL LANGSTROTH, M. D.

(From the Department of Medicine, University of California)

We have found several therapeutic measures to exercise such a profound effect on the health of body tissue that we have been led to question whether this was not accomplished through influence on metabolic processes. Heretofore metabolism has been largely considered from the point of view of oxygen consumption and carbon dioxide production. When these fell within certain limits the metabolism was considered normal. When nutrient material in proper proportions replaced the food burned in the body the demands of metabolism were fulfilled. Now, however, we are beginning to see that various rather occult influences are working to control these processes. It has been shown, for instance, that certain substances found only in fresh food and called by Funk vitamins are necessary for normal growth and existence in animals. These must be considered as influencing the metabolism, even though, in their absence, the oxygen consumption and carbon dioxide production are normal. In the same sense, if through failure of certain controlling factors an organism gains enormously and out of all proportion to its fellows in weight, the metabolic processes must be considered abnormal. It would seem, then, as though there were several factors which influence oxidation in the body qualitatively instead of quantitatively, controlling them in such a way as to result in normal function.

The factors which have been found to influence metabolism so profoundly are food, body activity, mental activity, and sun exposure.

The question of the applicability of the newer facts regarding nutrition of animals to humans has recently been discussed by McCarrison and McCollom. It seems certain that our instincts in regard to amount and choice of food are faulty. Frequent questioning of patients has led to the belief that the diet of all those who work at manual labor, most of those occupying less lucrative positions in other walks of life, and a portion of well-to-do people is faulty in three respects: first, in excess of calories; second, in excess of artificial carbohydrates, such as starch and sugar; and third, in deficiency of such fresh foods as contain vitamins. It is very frequent to hear of breakfast made of toast, cereals and coffee; lunch made of

meat, potatoes, bread or cake, with only slight changes in regard to dinner. It is easier and cheaper to satisfy the appetite with these foods, which obviously are deficient from our new point of view. The effects of such a diet are modified by certain other factors, such as exposure to sun, exercise and psychological processes, but tend to produce degenerative diseases and a lowered resistance to bacterial infection. The degeneration appears usually throughout the organism. It is evidenced by the color and texture of the skin, the color of the sclera, the feel of the tissues, the behavior of the heart, arteries and vasomotor system, impairment in the joints and locomotor system, and functional insufficiency in the gastrointestinal tract. The nervous system should also be mentioned as profoundly influenced in such a way as to give increased irritability. Along with these degenerative changes there comes increased susceptibility to infection, beginning with such things as common coryza and ending with serious infections, such as appendicitis or cholecystitis. The degeneration and the lowered resistance appear together, so that frequently the effects of the one are laid to the other. A common age for the appearance of these changes is from 35 to 45, though of course this is influenced by the modifying factors mentioned above and by heredity. Just as in laboratory animals, proper nutrition of the preceding several generations in respect to vitamin-containing foods will result in animals having more resistance to food deficiency, so in different individuals the food of parents and grandparents will influence the age at which improper feeding will bring on these metabolic changes.

The second great factor which we have found to influence metabolic processes is bodily activity. Any consideration of proper body activity must take up, first, the efficiency of the machinery with which the exercise is to be done. It is obvious to those interested in posture that no activity without undue effort is possible to those individuals who stand in a state of ill balance, who have pronated feet, sprung knees, sway backs, prominent bellies, and forward shoulders and head. To many such mere standing is a nervous effort because of the lack of balance of enervation required in this act and complaint will be made of points of strain in the lower back or neck. Minor degrees of faulty posture will be fairly well compensated until middle age, perhaps, when the points of strain may be the sites of special localization of degenerative metabolic arthritis. Exercise implies to us balanced movement of all of the muscles of the body, which is restful and relaxing unless carried to extreme. In this sense, any work which has to be done in the sitting or stooping position with the back bent forward, the chest compressed, the diaphragm low and inactive, and the abdominal muscles relaxed, is neither restful nor relaxing, and cannot be called exercise. We believe that proper exercise in a normally balanced individual to the point where muscles, tendons, ligaments and joints are stretched and pulled, breathing and circulation are markedly quickened, and slight fatigue is felt, increases the local resistance of parts involved to both trauma and infection, and has a stimulating effect on metabolic processes throughout the body. The better bal-

anced the body, the better developed the musculature, the less will be the effort and the greater the benefit.

The results are decreased irritability of the nervous system, increase in sense of well-being and physical power, decreased fatigue in doing work, increase in speed of reaction of the vasomotor system and more normal activity of the gastrointestinal tract. The importance of proper body balance, or posture, and proper body development, or power, is emphasized by the fatigue developed when work or exercise is attempted in their absence. Fatigue is perhaps the most potent factor in lowering the resistance to infection and making apparent the functional deficiencies of various organs or of the organism as a whole. To make this clear one only has to point out the frequent gastrointestinal crises in an ill-balanced individual who has been overeating from poorly selected foods without exercise and working in a state of mental overconcentration for years. They are characterized by nausea, anorexia, headache, constipation, the syndrome called biliousness, and brought on by fatigue induced either by unusual gastrointestinal overload or unusual physical or mental strain. The important point is to consider the organism here as a whole and the fatigue state as a reaction in a bad piece of machinery to a stimulus which in a normal individual should pass almost unnoticed. In youth these individuals possess a certain reserve of strength which covers up the reaction, but as duties and responsibilities multiply this is exhausted and the symptoms of fatigue appear.

The third great factor which we have found to influence metabolism is the type of psychological reaction of the individual. When absolutely normal this allows of contact with other beings in almost any situation without sense of fear or unusual effort; it permits of the accomplishment of work without undue expenditure of energy, without overconcentration. Various degrees of abnormality make ordinary intercourse with others an effort or an agony. The habit of overconcentration is a great American fault. It results in an expenditure of energy at too high a rate; it tends to allow one problem to occupy the mind after the interval when physical contact has passed; it finally carries an individual through routine movements with his mind occupied with things entirely apart from them. The rest which comes from frequent and purposeless change of thought processes originating in sensory impressions is lost. The mind loses the power of being actively stimulated by the trivialities about it and grows weary from constant daily rehearsal of the same problems. Practically all of these abnormal psychological reactions produce their deleterious effect on the mind through the fatigue of endless monotonous repetition, and its first symptom is increased irritability of the nervous system to somatic stimuli. The expression of the fatigue is then often on a physical plane; disorganized movement of the gastrointestinal tract, loss of proper vasomotor control, increased sensibility to somatic processes and increased muscle tone and restlessness. When sleep is insufficient or fails, physical and mental degeneration rapidly follow. To mistake such manifestations for local disease of the organ in which they occur is to do the patient the greatest

possible harm, for it often prevents or makes reassurance difficult when the true cause is discovered.

A fourth factor which we consider influences metabolism is sun exposure. In this respect we may take our lesson from the history of races which live with their bodies largely exposed to the sun, or from the now well-known effects of sun exposure on experimental rickets or on the ophthalmia induced by deficiency of fat soluble A. The benefit from the sun's rays in tuberculosis must be through effects on metabolism.

I feel that each of these factors plays a large part in the metabolism of the individual, at least when we regard normal metabolism as leading to health, and abnormal metabolism away from it. Each may be said to modify the other in some way. Thus, a well-balanced muscular individual whose work consists of balanced movement in the sun and falls short of fatigue will tolerate more excess of starch and calories and less vitamin-containing food. But this same individual, working under the same conditions when confronted with mental problems which he allows to become obsessions, will show fatigue symptoms, lowered resistance and degeneration; or, an individual with moderately bad posture and the habit of overconcentration may compensate for these by proper exercise and food, but develop arthritis when the diet is deficient in vitamins or over-rich in the artificial carbohydrates and the exercise is stopped.

From a conviction of the importance of each of these factors to normal metabolism we have been led to explain the origin of many diseases on this background of disturbed metabolism. We are convinced that this plays the principal part in lowering resistance to the common non-specific infections, and by such we mean those infections which do not usually confer a lasting immunity, in contradistinction to typhoid, diphtheria, and the various exanthemata. Common colds, sinusitis, the bronchial and lung infections, the various gastrointestinal and skin infections we believe fall in this class. Such metabolic abnormalities we feel sure are at the base of such diseases as arthritis, many circulatory system degenerations, and much vague so-called functional disease.

This conception has largely influenced our therapeutic plans and enabled us to carry them out in a more fundamental way. Treatment of a disease has meant, first, establishing a background for it, determining to what extent damage has been irreparable, instituting reparative or ameliorative medical or surgical measures, and then setting about modifying the background when this has been possible. To many patients, acceptance of such a point of view is difficult because of its newness and simplicity. A sufferer from so-called hyperchlorhydria or hypersecretion, accustomed as he is to fractional gastric test meals, alkalies and bland food, will often refuse to put the responsibility on carbohydrate excess, overweight and inactivity. When it comes to a question of self-denial and persistent effort, he finds it easier to believe that his stomach needs specific treatment, which further sensitizes the nervous system to somatic stimuli. Many times the question is largely an economic one. Proper vegetables and fruits are expensive, and for many almost unobtainable. They keep poorly as compared with potatoes,

bread and sugar. Physiotherapy for the proper development of ill-balanced bodies is difficult to obtain and expensive. Telling a posture patient to go out and exercise is doing him more harm than good because of the excessive fatigue due to ill-balanced movement, and controlled exercise is essential in most cases for a considerable period of time. Treatment of the mental state is arduous, but essential for restitution of health. Temporarily, responsibilities must be lessened and the situation made simple enough that rest is obtained, but the aim should always be to build up sufficient strength and understanding to allow the individual finally to adapt himself to his environment, unless that be intolerable.

It is evident that there are stages in degenerative or infectious disease where any such methods of treatment are inapplicable because of the extent of organic change. An estimate must first be made of the degree of permanent impairment, for the treatment of an individual with a chronic nephritis and only 30 per cent of normal function will be modified by his kidney condition. In fact, the application of these principles I have found of greatest value in those who complain of headache, fatigue, the milder forms of indigestion, arthralgia, etc. In other words, in those in whom as yet there is no evidence of established disease. This is, after all, the field in which we should be most eager to get results because of the opportunity to prevent the onset of irreparable damage.

In order to show the results achieved in different types of illness the following case reports are appended:

**Case I.**—Mrs. B. This is the case of a woman of 42 who had an oophorectomy and appendectomy in 1906 following divorce from her first husband. After her operation she developed left-sided weakness which was attributed to a stroke. There was a later history of loss of consciousness for two weeks following an emotional upset. After her divorce she was weak and nervous. She had a nervous breakdown in 1909. She had suffered from headaches for three years. The pain began in the back of the neck and traveled up over the head to the eyes and was accompanied by nausea and prostration. She tired easily and had been indoors at her housework practically all of her life. She weighed 170, was strongly built, but flabby and pale, and had cold hands, feet and ears. The sclerae were muddy. The tonsils were moderately enlarged. There was a faint systolic blow at the apex and base of the heart. The heart tones were feeble, the blood pressure 160/90. The abdominal wall was flabby. There were no signs of disease of the nervous system. There was considerable lumbar lordosis and a forward head, neck and shoulders. The upper dorsal and cervical spines were tender, though movement here was fair. All the laboratory examinations were negative. This woman's headaches were attributed to fatigue on the basis of weak musculature, poor posture, circulatory and vasomotor asthenia. She was given a diet containing liberal amounts of meat, milk, eggs, fruits, vegetables, cheese and nuts, with cod liver oil and yeast. No sugar or starch was allowed. Her physiotherapy was begun with vigorous general massage and baking for the neck. Breathing exercises followed, then resistive, and finally general exercises. There was prompt cessation of the headaches; the sclerae became clear, the cheeks and lips pink; the general strength gradually increased.

**Case II.**—Mr. F. J. This is the case of a man of 30 with asthma. He began to have persistent colds with sinusitis at 19. At 23 he developed asthma following a cold, and for two years before I saw him was short of breath and wheezy every night. Vaccines never

helped him. He had been tested for sensitivity to proteins. He showed slightly reddened tonsils, moderately bad posture, squeaky rales in his chest, a low blood pressure—105/80—and low arches. His nasal passages showed nothing abnormal. He looked tired. His laboratory work was all negative and he showed no reaction to a large number of pollens and food proteins. The bronchial spasm was attributed to persistent infection in the bronchial mucous membrane, following his attacks of coryza. These were preceded by a lowering of general resistance due to fatigue from bad posture and lack of exercise. He was kept in bed for a month to increase his resistance, and when his spasm relaxed, massage and resistive exercises were begun. The attempt was made to deepen his chest, strengthen his diaphragm, correct his posture and increase his strength. Change in his neck gradually necessitated his wearing a collar a whole size larger, and his waistcoat had to be let out about four inches. He continued having a little spasm at night for a long time, but the gymnasium work was continued and in six months he was dismissed. Two years later he was able to pass an examination for life insurance and was completely cured.

**Case III.**—This is the case of Mrs. P., a woman of 55 with asthma. She had had mild arthritis of her fingers for fifteen years with occasional joint pain in the left knee. Six years before, following a period of great mental strain, she caught a very bad cold, following which she developed wheezing and asthma, which lasted most of the winter. She had several bad attacks later and avoided exertion because it brought on wheezing. She showed moderate degenerative arthritis of the hands and spine, a few crackles in her lungs, a blood pressure of 155/88, but was otherwise negative. Her laboratory work was all negative. It was considered that she had a very small circulatory reserve, lowered resistance from strain and fatigue and disturbed metabolism from improper eating and lack of exercise. She was given a diet of about 1700 calories, but the artificial carbohydrate was limited to three slices of bread daily. She lost about fifteen pounds. Physiotherapy was begun at once, as she was practically free from spasm. The attempt was made to increase her vital capacity, strengthen her respiratory muscles and increase her cardiac reserve.

She improved rapidly and was able to exercise normally, but had to be very careful to avoid fatigue and take to her bed promptly at the first sign of a cold. In this way all asthma was avoided.

**Case IV.**—Mr. G. This is the case of a man of 41 who was referred by Dr. Franklin on account of attacks of iritis. He had always been a very heavy eater of concentrated foods, and at 25, when he stopped leading an active physical life in the open air, his weight jumped from 190 to 215. After that he had a great deal of pain from arthritis of the spine, for which he had a tonsillectomy, prostatic massage and the usual dental work. After his graduation from college at 20 he had attacks of iritis, sometimes as often as two or three a year. He had an active iritis in the right eye, which was the site of an old iridectomy. The left pupil was irregular and contracted. His hands were blue, his abdomen protuberant, and his whole spine practically rigid. His tongue was coated and his breath characteristic for individuals who eat improperly and under-exercise. All laboratory tests were negative. His arthritis and iritis were attributed entirely to improper food and lack of exercise. He was given a diet of 2000 calories with large amounts of fresh vegetables and fruits and the artificial carbohydrates limited to three slices of bread. Physiotherapy was at that time not available. In two weeks he was better, and in two months his spine was practically free from pain, though stiff; his eyes had quite cleared up and he felt better than for ten years.

**Case V.**—Miss H. This is a case of a woman of 38, seen in 1921 for headache and nervousness. She developed a cough in 1918 and was thought to have tuberculosis. In 1919 she went to Colfax for some months and improved. Tubercle bacilli were never found. After 1918 she was unable to work. She

suffered frequently from headaches and had pain all over her body. She never exercised, but ate a fair diet. The x-ray showed old peribronchial tuberculosis. There was no activity apparent. Under rest, over-feeding and physiotherapy she improved in three months so that she was walking several hours daily and taking very vigorous general exercises. For two years she was up and down, but never free from complaint until recently she was given a diet containing no artificial carbohydrate and large amounts of fruits and vegetables. Ultra-violet irradiation was begun every day and she soon improved very markedly in strength and felt absolutely well. Her headaches and general weakness were attributed to fatigue on the basis of lack of proper musculature, but the part that diet and sun exposure played in her treatment makes it clear that these were equally important.

#### SUMMARY

Restriction of the caloric intake to the approximate metabolic needs, by elimination of starch and sugar and substitution of such vitamin-containing foods as milk, fresh cooked vegetables, and raw fruits, results in increased tissue health. This is manifested by lessened fatigue, increased resistance to infection and regression of beginning degenerative processes. Exercise when carried out by an individual so balanced that it does not result in fatigue of isolated muscle groups is a powerful adjunct to proper feeding in promoting normal tissue metabolism.

Personality defects through the fatigue incident to the struggle for adjustment are powerful factors in the breakdown of resistance to fatigue and infection. Sun exposure has a stimulating and beneficial effect on tissue health.

#### CONCLUSION

Our experience leads us to believe that metabolism is influenced in a qualitative sense by food, exercise, personality adjustment, and sun exposure. Improper balance among these or failure of one or more of them leads to fatigue, lowered resistance to infection, and to degeneration. This state is often the background on which many disease pictures arise and a proper conception of its causes leads to a rational plan on treatment.

#### DISCUSSION

**Franklin R. Nuzum** (Santa Barbara Cottage Hospital, Santa Barbara)—Doctor Langstroth has emphasized a new viewpoint in the etiology of many common disease processes. He has emphasized the role of improper diets, overeating, lack of exercise, faulty posture and mental stress in bringing about a lowered resistance to common infections such as coryza, sinusitis, migraine, "biliousness," and such degenerative diseases as arteriosclerosis and chronic kidney and heart diseases. He reminds us that the successful treatment of these conditions means not only symptomatic aid for the prominent complaint, but educating the patient in correcting those factors which have been primarily responsible for the difficulties.

Proper diets deserve special mention in a discussion such as this. Physicians generally have been loath to giving enough attention to the study of diets, but it is not difficult to recall that at bed rest it takes but 1000 calories per day to maintain the weight and body heat of an adult. If this man sits up but four hours per day, 1500 calories supplies these needs. For the average professional person 2200 to 2400 calories are sufficient to maintain his weight and to supply him with energy. The laborer requires 4000 to 4500 calories. A sufficient bulk in this diet to insure daily bowel movements may be obtained by fresh fruits or fruit juices and a fresh or cooked vegetable at each meal. By these food constituents the neces-

sary vitamins and the mineral demands of the body are well supplied. An interesting experiment for one to try is to take two fairly comparable anemic individuals and give to one iron internally in the form of your pet prescription, and to add to the diet of the other a colored vegetable such as carrots. The increase in the per cent of hemoglobin in the second instance will convince you of the efficiency of the dietary method of treating anemia.

In addition to the fruits and vegetables that any normal diet should contain, attention should be paid to the carbohydrates, proteins, and fats. We frequently forget that in the processes of digestion 58 per cent of the proteins and 10 per cent of the fats are converted into sugar and used as such, in addition to all of the carbohydrates.

Evidence of a disturbed metabolism in such chronic conditions as arthritis and the degenerative heart, blood vessel, and kidney diseases is indicated by a study of the urine. A very high degree of urinary acidity is found to be present in these patients. It is not uncommon to find the urine of a chronic nephritic patient, for example, to be 1000 times as acid as the body fluids. Is it unreasonable to suppose that the kidney, which for years must stand the strain of excreting such acid products, finally develop degenerative changes as a result of this overwork? The highly acid urines are a result of eating acid diets—that is, diets that are largely made up of meats, fish, eggs, cereals, and bread. These acid articles should be balanced by foods which are alkaline in their reaction when metabolized in the body. These foods are the fruits, fresh and cooked, and include oranges, grapefruit, and lemons; the vegetables, and milk. Such a proper balancing of the diet results in the excretion of neutral or slightly alkaline urine.

For a long time the contention has been raised that the eating of protein (acid diets) is not responsible for the development of degenerative diseases such as arteriosclerosis and chronic nephritis, because it has not been reproduced in experimental animals. This objection no longer holds. Chronic nephritis in experimental animals has been obtained with acid diets by several investigators. I have myself obtained such results in over 100 animals by feeding diets high in protein (acid). And what is even more important, I have succeeded in obtaining an increased blood pressure in many of these animals. So far as I am aware this demonstration of increased blood pressure by "acid diets" has not heretofore been recorded. Now that these conditions have been obtained in experimental animals the objection will be raised that these are unnatural diets for these animals. The same may be said of the human animal. He has for a long time been living on a poorly balanced diet.

#### MORE ABOUT MIDWIVES

A recent official publication calls attention to the fact that, in the proud and modern city of Buffalo, 12,358 babies were born in 1923. Of these, 2340, or 18.94 per cent, were attended by midwives. Why? Buffalo is more than well supplied with educated physicians and hospitals, and many of the physicians are barely making a living.

What is going to happen when the federal and local "authorities" get these midwives "educated"? What is going to happen in California when ours are "educated" by a few "intensive courses" of a few days each?

**Rosenow's Serum in Prevention of Paralysis in Anterior Poliomyelitis**—During an epidemic of poliomyelitis in Omaha, Floyd Clarke and Andrew G. Dow (Journal A. M. A., August 9, 1924) had seventeen cases. All the patients received one or more injections of Rosenow's serum. In every instance when they were able to see the cases soon after onset, and an early diagnosis was possible, recovery was complete without paralysis.

## EDITORIALS

### DOING THE RIGHT THING IN THE WRONG WAY

(Read, approved, and ordered published by the Executive Committee of the C. M. A.)

Periodic medical examinations for everyone from birth to death ought to be a universal custom, *provided* that the examinations are thoroughly made by adequately educated physicians; *provided, further*, that written records of all these examinations be made and strictly limited in their placement to the physician's files, possibly with copies to patients or parents; *provided, further*, that the examination be thorough and followed up by remedial measures by the physician of the patient's choice and, *provided, further*, that due care be exercised to avoid pauperization of the well-to-do in the carrying out of this worthy work.

What should not be done is precisely what is being most extensively carried out in California now, particularly in the periodic examinations of young children. In this issue, and in former issues we review some of this work from many places. We will continue to give the news in future issues. Boards of public health, school authorities and other government agencies, as well as civic and welfare organizations, have been, and are rendering highly creditable services in conducting publicity campaigns urging people to have these examinations.

They go too far, however, when they enter the field of the practice of medicine themselves, either by conducting the examinations and making the diagnoses themselves—which is by far the most difficult work of physicians—or by employing physicians or inviting them in a way they can't afford to refuse to conduct their work in public free clinics for rich and poor alike. This is essentially a particularly vicious practical scheme of pauperization of those who can and should pay for personal service. It is an unjustifiable and repugnant use of public money, national, state and local, to employ it to attempt to place the practice of medicine upon a communistic basis.

All worthwhile physicians always have been and are now willing to do all the free and part pay service needed for any citizen of this state. They are doing all that is worthwhile now. They prefer to do this work in their offices, hospitals, legitimate medically controlled clinics, and through other medical channels. They deplore the evanescent ballyhoo clinics and other circus methods applied to this serious business of life. They realize that the stimulation aroused by ballyhoo methods in health circuses or what not is usually temporary in character, and that after the band has gone and the excitement has subsided, we find that the level of things well done is lower than it was before. They realize that one end-result of this sort of thing is detraction from the standing of medicine as a dignified science, and it also is a cause decreasing confidence in physicians as health advisors and medical practitioners.

That this is so is attested by letters from intelli-

gent mothers to our service. Some of them say that we are unjust in some of our positions. Some of them say they never realized what ignorant old fogies their family physicians were until the neat modern doctors of the board of health and schools began to treat their children free in the clinics. Some say that they now rely upon the school nurses, public health nurses, and even teachers for medical advice with more confidence than they formerly gave to their family doctors. One recent letter highly praises the satisfactory services of a nurse in telling her what to do for her children. She says that the nurse always comes promptly and does not charge anything; that she formerly often found it difficult to find her doctor and then he often came very late.

Public health departments are for the most part—and should be entirely—in the hands of educated licensed physicians, but they should limit their activities to the legitimate and important specialty of public health. They all say, and truly, that success in public health work is determined by the extent of the co-operation of doctors engaged in the practice of personal health. Such health departments as those of Illinois, Ohio, Indiana, and other states refuse to enter the field of diagnosis and treatment of individuals by conducting clinics, or otherwise; except to furnish consultants in contagious diseases. They rely upon and easily secure the full co-operation of personal health practitioners upon this basis.

School departments have no business practicing either public health medicine or personal health medicine. They are, of course, incapable of doing either. They should call upon the public health authorities to practice and teach whatever of public health is needed, and they should call upon educated licensed practitioners of personal and private health for whatever of this service is needed in the teaching, prevention, or treatment of disease. They should have and, no doubt, would get all the co-operation they need by this method.

The nursing profession is as necessary as the medical profession among the agencies devoted to the betterment of health. Nurses should not engage in the practice of medicine. Few, if any, of them do in their private capacities, but some of them employed by non-medical groups and government bureaus are practicing medicine under incompetent direction. We readily grant the claim sometimes heard that nurses are better prepared to practice medicine than chiropractors and others, some of whom are licensed to practice. We will even go further and say that if anyone except fully educated physicians is to practice medicine, nurses are by far the most eligible group to choose from. It is our opinion that most nurses love their own profession, are proud of its record and standing, and find quite enough to do within the duties pre-eminently theirs without practicing medicine for which they would not claim to be fitted except under the instructions of employers. Teachers have enough responsibilities, in all reason, when they devote their lives to the dignified, necessary, and highly respected calling of teaching. Their smattering of knowledge about health and disease does not prepare them to either teach or practice personal or public health. Those with a high school

education would make just as much of a success and one comparable in its end-results by attempting to teach the intricacies of analytics and calculus.

None of us can teach effectively what we do not know thoroughly ourselves, and "a little learning" is as dangerous today as it was when it was first written.

A member of the council, in endorsing this editorial, adds this note: "A few years ago one of these uplift organizations held a baby show. A Cretin I had had on thyroid for a year took the first prize. This child had beautiful auburn hair, was bright and appeared in fine health, by casual examination. She would attract attention anywhere, but I am sure any competent physician would have been suspicious from the general appearances alone. The parents have since become eddyites, and the child is now a fat, stunted idiot."

### QUININE ON PROTEIN METABOLISM

Among the most widely used drugs as a moderately efficient antipyretic and analgesic in the treatment of colds, headaches and neuralgias is quinine. For over sixty-six years the antipyretic action of the drug has been attributed to diminished heat production due to a direct depression of nitrogenous metabolism. In fact, this depressant action of quinine has been generally quoted in text-books of physiology and pharmacology as evidence of one of the mechanisms concerned in temperature regulation, namely, that of heat production; that is, anything that lessens heat production, such as the quinine depression of metabolism, lowers the temperature. Experimentally, this action has been made use of in studies of thyroid function, anaphylaxis, etc. Curiously, the marked influence of quinine upon nitrogen metabolism is without influence on oxidation. This paradox has led to the expression that oxidation is not the only source of heat; that heat may be liberated by other changes—e. g., splitting or hydration of nitrogenous molecules, in the course of which the nitrogen is converted to urea; and that it is these changes which are hindered by quinine. Now, however, we are assured by Hardikar of the Department of Pharmacology at the University of Edinburgh that the widely held conception of quinine as a metabolic depressant is all wrong.

From an extensive critical review of practically all the previous experimental and clinical work on the subject, Hardikar found that not a single one of the investigations contains acceptable evidence which would conclusively establish the depressant action of quinine on metabolism. Not satisfied with the results in the literature, he also made carefully controlled experiments on animals and human subjects over long periods, observing changes in the urinary excretion of total nitrogen, ammonia and creatinine by modern methods of chemical analysis. Experiments were also made with quinine in febrile and thyroid-fed dogs with the idea of determining the influence of the drug in conditions of artificially increased metabolism. The inhibitory influence on the hastened metamorphosis of thyroid-treated tadpoles was also observed. The results showed that 1.2 gm. per diem in the normal human subject, and in doses up to 50 mgm. per kilo in rabbits and dogs, had no influence upon nitrogen metabolism. Quinine hydrochloride in 1:10,000 concentration had no power to inhibit the action of thyroid on tadpoles. From these completely negative results, Hardikar

concludes that quinine has no influence on protein metabolism even in doses which may be toxic in themselves.

Although the negative results of Hardikar, as far as they go, throw considerable doubt on the metabolic action of quinine, the results in febrile human subjects might be different, for after all the most striking effects of any antipyretic, including quinine, are seen in fever. Moreover, the antipyretic action might be exerted through some other mechanism besides the metabolism. In this connection, one is reminded that the quinine group (quinine, quinidine and other cinchona alkaloids) exerts important depressing influences on the circulation. These may occur with therapeutic doses which do not demonstrably reveal changes in blood pressure, etc. Is it possible that such circulatory changes bear a more important relation to the antipyretic action of quinine than any direct influence on the metabolism? A positive answer seems reasonable from the fact that the circulatory depression of such drugs as aconite and veratrum readily explains their antipyretic action. Clinical methods should assist in settling this proposition. Meantime quinine still remains a good antipyretic, and, if Hardikar's results are confirmed, other drugs reputed to influence the metabolism will need reinvestigation in order that their actions might be better understood.

Hardikar, S. W.: Journ. Pharm. Exp. Therap., 1924, 23: 395, "The Action of Quinine on Protein Metabolism, Respiratory Exchange, and Heat Function. I. Protein Metabolism."

### ANOTHER HEALTH SURVEY COMBINED WITH A "DEMONSTRATION"

(Read, approved, and ordered published by the Executive Committee of the C. M. A.)

Elsewhere in this issue is published at the request of the American Child Health Association some matters that invite comment.

Various national organizations and combinations of these organizations, most of which have headquarters in New York, are undertaking and pushing forward by the usual means of publicity and otherwise, a vast movement not fully appreciated, we believe, even by themselves, and certainly not by the general working agencies in the broad field of medicine scattered over our country. Influential as some of these organizations, and particularly their associated conferences, are, they are evidently feeling the sting of adverse criticism that is piling up in ever-increasing amounts against some of their activities.

Readers will notice their answer to the criticism that they are leaders in a movement toward paternalism in medicine which is published elsewhere in this issue. That apology is worth reading carefully, worth pondering. They state that "whatever be the merits of state medicine, the Commonwealth Fund is not lending its influence to anything of the sort. It has no desire to interfere with the practice of private physicians." It is difficult for serious students of things medical to accept their denial because, for one reason, several of the officials and leaders of these organizations whose names are published on the back of the letter-head have at one time or another taken

active part in campaigns for compulsory health insurance. Some of their recent writings do not indicate that they have changed their attitudes. Notice that their denial states that there is no desire to interfere with the private practice of physicians. Of course not; there is no possibility of interfering with the *private practice* of physicians except to legislate them out of business, or legislate all their business into other hands. It is possible, and physicians should recognize this, to restrict the private physician's opportunities to such an extent that he will be limited to the *treatment* of disease only. That this is the object of certain movements is clear. That this is state medicine, socialized medicine, paternalism, or whatever one wishes to call it, there can, of course, be no doubt. Notice particularly the statement that no *remedial* work will be done. This definitely states, and the same thought is even more definitely stated in much of the literature being issued for the edification of the public, that the practice of medicine is *treatment*. Diagnosis, that most important of all the services which the physician renders, and the prevention of disease, are not the practice of medicine, but education, or something else, in their opinion. The campaign is obviously for the purpose of educating the people to believe that all the practicing physician does, and all that he is fit to do, is to *treat* such patients as cannot be induced to attend some free service. This only after some national organization or bureau of government has made his diagnosis for him, and has instituted all of the methods of prevention, and has given all the advice the patient needs, except that of craftsmanship of the surgeon and the employment of pharmaceuticals by the physician.

Read what they say they want to do. It includes all those things that we have educated and licensed physicians, health officers, nurses and other agencies of medicine to do. We are warranted in concluding that they want us to do it better, which is a very laudable sentiment we will all endorse. They assume that they are prepared to survey us and tell us how to do all these things.

Who are these self-appointed strangers who propose to come to California, or any other great state, assume leadership and outline and instruct physicians, public health officers and all others engaged in the service of better medicine? We are ready to admit that possibly some of them are qualified to make the claims of unusual ability about themselves that they do make. We do not believe that the majority of them merit their claims to leadership, either by superior education, superior experience or superior judgment over those of equal and better qualified men right in our own state. Some of the most harmful and disturbing antagonism against the forward movement of the better health campaign in California, and in some other states, for that matter, has been brought about by the hurried surveys, demonstrations, propaganda methods and other practices of the strangers who leave out many of the important things that should be included in their surveys, and have dwarfed, twisted and otherwise damaged a worthwhile movement.

California has three Class A medical schools, which have provision for and are carrying out graduate instruction and have trained public health and private practitioners who will compare favorably with the strangers who come in over night and tell us what to do, how to do it, and then leave. If we had to deal with only one group of them, we could possibly survive, but we are not through with one before another appears, to find the same facts and record the same things and tell us *their* way. We have already had several groups of these surveyors and demonstrators this year, and there are two of them in the state as this is written. If all of the surveys and recommendations that have been made for the edification of the "benighted" citizens of California during the last few weeks were put into manuscript form, they would make a stack at least ten feet in height.

Many classes of workers in the broad field of health resent the presumption of some of these nationalizers of health, and citizens in other walks of life suggest that it would be cheaper to employ a few of them permanently than to directly or indirectly pay for so many expensive junketing trips, for large groups of them. The article in question says "special consideration will be given to health teaching in the schools, for it is believed that the solutions of health problems for individual, community and nation rest upon the teaching of health in our schools." We already know that. The problem is receiving serious attention by many of our own agencies, and progress is being made. Health teaching is not even limited to school children, but is extended also to other citizens. We are even engaged in an attempt to settle the problem of who shall do this teaching; what they shall teach. About these two questions there are differences of opinion among people, including those of New York. We feel like saying to these various groups who are angling for invitation from California to come out and tell us what to do that if they will first permanently settle any health problem in their own jurisdiction, and even within their own city, to the satisfaction of thinking people, then we will ask them to come out here at our expense and settle it for us.

CALIFORNIA AND WESTERN MEDICINE is suffering no illusions about the possible effectiveness of any opposition which we can institute against any of these movements. They are too well promoted, too well financed and are carried forward by too many high-salaried persons who have nothing else to do but promote organizations and movements which, when once started, they expect the government to continue while, at the same time, they deny that they are for paternalism in health, education or social welfare. They are making progress and will continue to do so unless they have a row among themselves, which might happen at any time.

Some of our cities already have entered the contest to secure this latest survey and demonstration, and others no doubt will do so.

### LONG BEACH "COMMUNITY" HOSPITAL

(Read, approved, and ordered published by the Executive Committee of the C. M. A.)

Singing and a few other harmless diversions can be placed upon a "community" basis. Even here, discordant notes are often the outstanding feature of the "music" as a bystander observes it. In any serious, progressive attempt to molecularize a community, the atoms in the molecule become so active that they destroy the hand-made molecule and some of the atoms. This is being exemplified in the history of "community hospitals."

It is no more possible to establish and operate successfully a "community hospital" than it is a "community religion," "community banking," "community merchandising" or any other worthwhile movement which requires for its success a firmly fixed common denominator upon which all citizens are willing to take their stand and keep standing.

We should not forget that our whole structure of civilization, governmental and otherwise, has been built and stands upon the unit of the individual citizen. The furthest we can depart from this unit successfully is by grouping *similars*. This upon such bases as religious, financial, moral, social, educational and health similars. When we enlarge our groupings to include dissimilars, we immediately have strife, which must be controlled by force or disintegration results. Yet this is precisely what so many people are trying to do with "community" this of that, including hospitals.

With hospitals, which concern us primarily in this instance, it never has been done, and there is no available evidence or intelligent prophecies to show that it is likely ever to be done while human nature remains as it has been for some ages.

The greatest single problem in successfully promoting and conducting a good, progressive hospital is to bring together enough similars in elements essential to such a complex human service station to produce the high character of team work required. For example, it is difficult enough, in all conscience, to bring together so they will do team work in essential harmony a staff of adequately educated physicians who have been trained by the same or similar teachers for years. To even attempt to go further and include osteopaths, chiropractors, mental healers, and other insufficiently educated persons, upon an equal status is, of course, the height of folly. Similar situations apply forcibly in others of the essential departments and services of a good hospital.

In spite of the several failures in thus attempting the impossible, to be found in places in California and elsewhere, our people continue to make the experiment. The pathetic spectacle of the happenings at Whittier hospital in Los Angeles county are of that type, and were discussed recently in CALIFORNIA AND WESTERN MEDICINE.

#### LONG BEACH

Now comes another example from Long Beach. Speaking from the angle of normal zoning flow of people, this city of 200,000 persons has Seaside Hospital, with 150 beds, and St. Mary's Hospital, of 100 beds; both good hospitals. Some years ago a movement was started to build and operate a com-

munity hospital. After much hard work by persons, many of whose motives were highly commendable, a hospital building was finally erected on city property, paid for partly by tax money, partly by private philanthropy, and partly by public subscription in the form of stock certificates. As the building approached completion, the organizers became concerned with the methods of management, financing, staffing, and other fundamental problems of policy that should have been settled before a dollar of money was accepted or spent.

One of the first things that happened to them (as they were warned when the proposition first began to take shape would happen) was, that doctors, nurses and others adequately educated for their several responsibilities in medical and hospital work, offered their assistance and co-operation only on condition that the hospital be conducted as an agency of scientific medicine along approved and well-known lines. It was also discovered not only that these professionals meant exactly what they said, but that any other policy would make it impossible for the hospital to operate a legally accredited school of nursing, and that they could not receive an accredited rating by the American Medical Association or any of the several other accrediting agencies which distinguish hospitals operated as agencies of scientific medicine from others.

The osteopaths, chiropractors and other groups of "licensed" and unlicensed healers by special methods and many of their clients and followers got under way with the usual cry of discrimination; medical trust; abusing the under-dog; the right of everyone to have the "doctor" of his choice serve him anywhere he wants to call him, etc.

After much discussion, in which the committee representing the American Medical Association and our California organizations in hospital betterment was called in, the Long Beach city council leased the hospital to a hospital association, thus giving to the officers of that association the power to fix policies and otherwise conduct the hospital. The lessees, under the able and conscientious leadership of Mr. Fillmore Condit, promptly pledged themselves and the hospital to the cause of scientific medicine. This was a difficult and splendid thing for a group of citizens—all laymen and some of them in positions to be affected by political manipulations—to do.

The problem may or may not be permanently settled. The osteopaths and chiropractors are well organized, and they undoubtedly will do all they can to throw the hospital wide open and thus convert it into a cult hospital. This is what will happen if they should succeed, because educated physicians, nurses and others who adhere to no sect or dogma and who consider themselves followers and practitioners of science wherever she may lead and who will employ whatever tools she fashions for the betterment of health, will not connubiate with those less qualified to serve.

#### THE SITUATION HOPEFUL

All who believe in adequate education as a basis—the only safe, sane basis—upon which much rest the

authority to practice the prevention and treatment of disease, have reason to be optimistic by reason of the following authorized interview by Mr. Condit, head of the association which now controls the hospital. Mr. Condit's interview, which has been published in the public press, is quoted in full because it is so eminently sane and unusual in the method of approach.

#### CONDIT REPLIES TO COMPLAINTS

"Replying to numerous complaints against the action of the directors of the new Community Hospital Association in making it a 'standardized' hospital, for use only of medical doctors, Councilman Fillmore Condit has issued the following statement:

"Editor Telegram: The Osteopathic Association of our city asks:

"Shall the hospital, which is owned and tax supported by all citizens, be used by all citizens?"

"The answer is: As patients, yes; but as cook, engineer, superintendent, nurses, doctors, no.

"All citizens of Long Beach may enjoy its parks, band or library, but all citizens may not be city manager, band leader or librarian.

"During the World War thousands of good people offered their services as doctors and nurses to care for the sick and wounded. Among those who offered to serve there was found a vast variety of trained ability, inexperience and ignorance.

"From this time and condition the imperative need for 'standardization' for doctors, nurses and hospitals arose. It increased and spread until it is now the rule in all hospitals under national control, in all universities having medical departments, is the policy of over 90 per cent of all the hospitals of our entire nation and those who adhere to standardization have charge of all health boards, national, state and municipal.

"Standardized' hospitals attract the most distinguished and successful physicians and surgeons; lack of standardization tends toward low reputation, mediocrity.

"If our Community Hospital discards the policy used by the most successful hospitals in America, what rule shall it adopt?

"The leading osteopaths of this city express their emphatic disapproval of an important rival school and admit that 'opening our hospital to all doctors would ruin it.'

Osteopathic doctors have little use for hospitals for their patients, and not over 5 per cent of the hospital patients of our land are cared for by them.

"An osteopathic hospital of thirty beds, located in Denver, 1600 miles away, advertises in Long Beach for patients.

"We regret medical disagreements, but if doctors of different schools are averse to working together in the same building, 'the greatest good to the greatest number' seems to justify the medical policy adopted by our Community Hospital.

"We regret if any of our people seem more concerned in our hospital as a battleground for professional quarrels than as a haven for human welfare

"COMMUNITY HOSPITAL ASSOCIATION.

"By Fillmore Condit."

#### SHORT-SIGHTED PUBLIC HEALTH POLICIES

(Read, approved, and ordered published by the Executive Committee of the C. M. A.)

Physicians and physicians' organizations are loath to criticize official public health departments, which they rightfully regard as one of the several legitimate specialties of medicine. Many worthy members of the California Medical Association are practicing the medical specialty of public health. Some of them are, and more should be, engaged exclusively in this work. It is just as important, useful, and commendable as is the practice of any other medical specialty.

Most practitioners of this specialty still combine their public health work with other features of general or special practice. They all realize that this should not be so, but they must live, and the part-time wages of from \$10 to \$50 a month is still the only compensation offered by the majority of public health units in California.

It is difficult to secure adequately educated physicians for "full-time" public health work also, because the salaries in the vast majority of centers are still hopelessly inadequate. Tenure of office also always rests in the lap of the political gods, and this work is, therefore, correctly interpreted as an extra hazardous vocation. Obviously, compensation for such "full-time" work must be by what is politely called salary, but which would be more accurately termed wages. Naturally, under the hazards of tenure of office and poor pay, it is hard to find educated physicians with so little dignity, self-respect or lack of ambition that they are willing to exchange the prospects of private practice, however poor, with a reasonable amount of personal independence, for a poorly paid, uncertain, political job where often they hardly dare call their souls their own.

So few educated California physicians are willing to make the miserable and inexcusable sacrifices they are asked to make that, to fill the few "full-time" public health positions available in this state, the state public health authorities have had to import people. People of this class do not always fit into normal situations. Some of them have curious ideals or they are forced to accept curious dictation. Some of them have not bothered to take out state licenses to practice in California. Our laws are certainly generous enough in this respect. These people are all practicing medicine, and no one can quarrel with those who wonder if these imported "full-time" health officers are deliberately defying the law or whether they are not able to qualify.

Certainly, some of them have curious ideas of their duties, limitations, and privileges. Some of them apparently feel that, so long as they have their county supervisors with them and are backed by a great private foundation located in New York, *which pays part of their salaries*, they can insult their colleagues in other branches of medicine with impunity. The reaction against this sort of thing is springing up strong in many places in our country, and it is becoming acute in places in California. A recent example is explained in the following resolution passed unanimously at a recent meeting of the Monterey County Medical Society:

"Whereas, It has been brought to the notice of the

members of the Monterey County Medical Society that a proposition has been made that all children in Monterey County, between the ages of 5 and 12 years, be given toxin antitoxin to protect them from diphtheria,

"Resolved, That the plan of giving toxin antitoxin to all children in Monterey County is unscientific and unnecessary, because proper tests have shown that about 40 per cent of the children are immune and will not contract the disease, diphtheria, from exposure.

"Resolved, That since the California Medical Association has unanimously voted that every doctor's office is a health center for anyone who may want treatment for anything, and that the Monterey County Medical Society has endorsed this plan unanimously, be it further

"Resolved, There is no reason why those who are able to pay for this work should be taken to a public health office or public health nurse to have the work done gratuitously; and be it further

"Resolved, That any child whose parents wish this protection can receive the same from his own family physician without charge, if the expense would be a burden on the family."

Gentlemen of the Board of Supervisors of Monterey County; gentlemen of the Rockefeller Foundation who pay part of the salary of a full-time, unlicensed public health officer, may we suggest that the unfolding plan, of pauperizing our citizens by "free clinics" for everyone and wholesale inoculation of children along unscientific lines, is resented as unwarranted, unnecessary, and dangerous to the progress of public health, which we all want to see go forward?

A councillor in approving this editorial adds the following note: "I do not approve of full-time health officers. I was health officer of — for eight years; was 'fired' because I would not go on full time. An examination was held and I was one of the examiners. An enthusiast who passed with a high mark, but had been a failure in general practice, was appointed. During the next year he had several rows with the city governing authorities, got the health department in a bad muddle, and was finally gotten rid of, although his position was under Civil Service. Men who will take these 'poorly paid, uncertain political jobs' are not likely to be of a temperament to appreciate the aims of progressive organized medicine. I believe a successful practitioner makes as good an executive, is more independent of salary, and will work better in sympathy with his fellow-physicians."

#### CALLING THE ROLL ON ETHICS

(Read, approved, and ordered published by the Executive Committee of the C. M. A.)

The question of the invasion of hospital staffs and the practice of medicine in hospitals by cultists has become very acute in California as a result of the initiative law permitting certain classes of people to license themselves to practice medicine. All physicians know, of course, that the League for the Conservation of Public health has been very active for several years in its hospital work, anticipating this very problem.

Certainly the ethics of the medical profession have not been changed as a result of the California elections which give groups of inadequately educated people authority to license themselves to practice medicine. Medical ethics do not permit of any recognition of cultists—licensed or unlicensed—either by individual physicians or by any contact with them in hospitals or elsewhere. There are some few physicians who have been and are violat-

ing their ethics in their personal practices and who have been conniving with cultists in such hospitals as were suitable for that purpose.

The time has arrived when the California Medical Association must go on record emphatically and positively for the good of scientific medicine. In answer to a specific request from the Stanislaus County Medical Society for a ruling, the Council unanimously passed at its 136th meeting the following:

"Resolved, That the ethics of the medical profession is a moral code, devised for the conduct of physicians in their relations with each other, with hospitals, other medical agencies, and with the public. It is the unanimous ruling of the Council of the California Medical Association that physicians shall live up fully to the spirit and letter of our ethics now as in the past. In particular, it is unethical for an educated physician—holding a degree of doctor of medicine from an acceptable institution of learning, and licensed to practice medicine and surgery or any of the specialties in California—to recognize in any way so-called 'doctors' of educational standards less than, or materially different from, those required for membership in a county medical society. So far as the medical profession is concerned, this same interpretation of ethics as applied to physicians is applied to hospitals. It is unethical, except under conditions of emergency, for a member of the California Medical Association to permit his name on the staff of a hospital that does not apply this interpretation of ethics to the institution. And it is furthermore unethical for members and ethical physicians to patronize hospitals that permit persons ineligible for membership in the California Medical Association to practice in the hospital or any of its departments."

What answer do you give yourself about this when your conscience calls the roll? How do you rate your colleagues and how do you suppose they are rating you in the retrospective hours at the close of the day?

#### THE TREATMENT OF MENTAL DISEASES AND DEFICIENCIES

(Read, approved, and ordered published by the Executive Committee of the C. M. A.)

Articles both by physicians and non-medical writers, calculated to arouse public interest in the treatment of mental diseases, are appearing in a number of publications. Some of these articles are decidedly of value, others are worse than useless because they show a lack of knowledge or the vision necessary to cope with so important a subject. We all need more enlightenment upon this subject, and it is to be hoped that the publication of informative, analytical, and constructive articles will continue until the public is aroused to a point that will force better care for these patients than they are now receiving.

Physicians have been insisting for years that psychiatry was as much a medical subject as appendicitis; that many mental deficiencies and diseases had their basis in, or were markedly influenced by, associated physical diseases; that a considerable number of mentally diseased patients could and ought to be cured, and that every chance of recovery should be given to all of them. Physicians have been pointing out that the vast majority of mentally ill patients were not given any such opportunity. Many of the hospitals for this class of patients are little more

than polite prisons where the inmates are given "custodial" care, and routine medical and nursing attention. Adequate facilities and competent personnel to render the service every mentally sick or defective person should have in diagnosis and treatment are found in but a very few places.

If the public can be informed of the actual situation and a practicable program placed before them, it is certain to lead to better care of these patients in better hospitals, better equipped for good work and personned by better trained psychiatrists and other physicians. Numerous articles are emphasizing physical diseases as frequent causes, in part or entirely, of many mental diseases. However, not all psychiatrists by any means follow Cotton and his colleagues entirely in their enthusiasm in believing that the correction of physical disabilities is followed so frequently by the disappearance of mental disease in the same patient.

There are numerous institutions in different states, says one medical reviewer, which have been thoroughly revolutionized as regards ordinary treatment of insane patients. There are also many others in which there is no serious lack of up-to-date intelligence at the directing center, but in which improvements have lagged because of bad politics and of an uninstructed public opinion. A great number of these institutions scattered over the country have been inferior in their personnel as a whole. It has been found much more difficult to provide good assistant physicians, good nurses, and good attendants of lower grade in hospitals for the insane than in large general hospitals for the treatment of ordinary diseases. It requires not only strong professional leadership, but also improved political conditions and an enlightened public opinion to secure from our state legislatures the appropriations necessary to provide the right kind of hospitals and equipment, and to employ superior professional talent together with trustworthy employes of non-professional grades. This general observation applies to prisons, reformatories, and other public institutions almost as truly as to hospitals for the mentally ill.

It is the business of the state to do as well as possible the things that it undertakes to do at all, in our prisons and hospitals. It was the old-fashioned view that insanity inflicted a terrible disgrace upon the individual and the family, and implied a taint that was transmitted and that could hardly be eradicated. The tendency was to conceal cases of insanity rather than to bring them forward instantly for thorough diagnosis and for hopeful treatment. Hope is a valuable factor in all the affairs of life, and it is exceptionally important in relation to an affair so sad as mental disorder.

There are few non-medically educated persons whose training is thorough enough to make their views upon these strictly professional controversies of any philosophical or scientific value. But any intelligent citizen may grasp certain practical considerations, while the philosophers and scientists disagree. *It is for the service-loving citizen to demand that in the care of the wards of the state in its hospitals and other institutions there should be medical efficiency and up-to-date management.*

### TALKERS AND WORKERS

Under this heading the Saturday Evening Post of May 31, 1924, publishes an editorial which has had such a remarkable appeal to a number of our members who are "carrying the ball" in our own medical organization that they have prevailed upon your editor to reproduce it:

"All organizations must have bosses—that is, people who are on the job 365 days a year. If an organization is large enough, and in addition powerful and prosperous, the bosses are known to the lazy arm-chair critics as inside or vested interests. If it is a small concern, like the men's brotherhood of the First Methodist Church or the local social club, the indispensable chairman of the entertainment or house committee is not termed a vested interest but is merely criticized without bouquets of any kind.

Someone must control the Republican party, the Smithtown Gulf Club, Harvard University, the Men's Social Club of Kokopec, and the United States Steel Corporation. The old clique which is now in control is charged, and no doubt justly, with passing the jobs around to the boys on the inside. Once in a while an indignant electorate or membership or group of investors throws out the inside bunch and a new deal is started. All organizations will die of dry rot if no new blood comes in, and there are times when only a surgical operation makes such assistance possible.

But analyze any organization and see what you find. Usually the insiders are there because they are interested, reasonably experienced and willing to give of their time. Nearly all the critics on the outside either lack experience and knowledge or will not give up other occupations. Most of the critics will not even attend the annual meetings if there happens to be a good movie on that night. Indeed, they will not even fill out a return postal card to the extent of running a pencil through the line that reads "I will attend the meeting." But the next time they enter the club, how they do pan the house committee for the way the pictures are hung!

It is fashionable in certain quarters to say that the great universities are run by vested and capitalistic interests, and to imply thereby that these institutions of learning cannot amount to much. A study of one such university shows that to all intents and purposes it is run by four men.

The reasons these four men exert so much influence are simple in the extreme. In the first place, they live rather close and are thus in a better position than many others to attend meetings. In the second place, they are so interested in the work that they are willing to sacrifice business, professional and personal interests to attend all committee meetings. Such willingness is not a matter of wealth, but of personal inclination. Two of the four happen to be wealthy; the other two are not. In the third and last place, before these men came to dominate the situation they had had experience and training on minor committees, and showed their interests in these details. Such a rule has exceptions, but, generally speaking, the inside interests are inside because they are willing to take the trouble and do the hard work, while the people on the outside are willing only to knock."—Reprinted by permission of the Saturday Evening Post. Copyright 1924 by the Curtis Publishing Company.

Bully! And it fits almost all sorts of organizations AND includes all sorts of "workers" AND most classes of "talkers."

There are two classes of "talkers" who are not specifically mentioned in the editorial to whom we would nevertheless commend its import: One group is made up of those who dash off their libelous opinions in letters and sign them. This is dangerous business. It must be an awful blow to the

vanity of a "talker" who maliciously and libelously criticizes a "worker" in a letter to a pal—male or female—to have that pal turn it over to the worker concerned. 'Such a letter in a worker's hands is an effective and permanent bloc. It is, of course, more if he cares to make it so.

However, sometimes "talkers" foregather in public places and, without bothering to see who is close enough to hear, proceed to outline their destructive plans.

Old experienced "talkers," when they are operating on "high," usually seek a secluded spot, where the light is not too bright, and whisper.

As we were saying, the editorial is fine, and it will do us all good, whether "talkers" or "workers," to read and ponder it.

#### REPRODUCING EDITORIALS

It is not to be expected that more than a few of the physicians in any center are going to take the trouble to examine more than a very few medical journals. Only those located conveniently to medical libraries have the opportunity to do wide medical journal reading, even if they wished.

The editor of CALIFORNIA AND WESTERN MEDICINE always has felt that a great deal of worthwhile discussion of subjects important to physicians, particularly that found in editorials, should have wider distribution. Following out this policy, many editorials, editorial comment, reports of committees, abstracts, proceedings of various special organizations, and similar matter, has been, and is being republished in CALIFORNIA AND WESTERN MEDICINE, always, of course, giving due credit.

That several other editors, both of medical and more general publications, and even newspapers, have the same idea is attested by the wide reproduction and abstracts from CALIFORNIA AND WESTERN MEDICINE editorials now brought to us by press-clipping services.

If you have what you believe to be good editorial matter or information from which editorials should be prepared, please send it in. Both the ideas and the material for many of the editorials now running in CALIFORNIA AND WESTERN MEDICINE, and some of the several now in the hands of the executive committee for consideration and censorship if need be before publication, have been supplied by an ever-widening circle of members who are sincerely interested in making C. and W. M. serve its purpose more thoroughly and wisely.

#### INDUSTRIAL INSURANCE CARRIERS ESTABLISHING THEIR OWN MEDICAL SOCIETIES

(Read, approved and ordered published by the Executive Committee of the C. M. A.)

There is much that should be interesting, illuminating, and of prognostic value to physicians in the rapidly growing custom of industrial accident carriers in promoting and operating their own clinics. The custom has become more general in Philadelphia than elsewhere, but it is spreading over wide areas. In these "service stations" doctors, nurses,

and others work on a small salary, a small commission, or both.

Development in the whole field of industrial medicine is headed in many wrong directions in California. A few members now seem to think that the moral code of ethics should have waivers put into it to allow them to meet the "peculiarities" of this branch of medicine. A cursory examination of the constitution and by-laws of the California Medical Association and the American Medical Association should be convincing that there is not a chance that such modifications will be made. There is nothing irksome in the moral code to which physicians must subscribe and hold inviolate, so long as they are ethical members of a great humanitarian profession.

It is true that there are physicians practicing industrial medicine, and other branches for that matter, who had their fingers crossed when they subscribed to the principles of ethics, and a few of them have long since repudiated these principles and are operating openly as free lances. To all such, we commend the code of chiropractors and other cultists.

#### C. M. A. DIRECTORY

Members of the C. M. A. are reminded that authority was given the last annual meeting for the officers and executive committee of the society to prepare and issue a directory of the members of the state organization. This listing is to be arranged alphabetically by counties.

County societies that wish reprints of their section only for distribution in local communities may secure these reprints by taking the matter up with the secretary of the C. M. A. This directory is now in course of preparation.

**Caution**—This directory must not be confused, as is apparently being done in the minds of some members, with other so-called directories of physicians and surgeons of the cities and counties of the state of California. Private directories are not under control of the organized medical profession, and none of them has been endorsed by the California Medical Association, regardless of whatever statements may be made by salesmen of these commercial directories.

**Simplicity**—"What a blessing is simplicity. And what a tenfold blessing it would be if simplicity were a part of medical thought and education," says an editorial in Colorado Medicine. "We could better understand ourselves if we forgot our jargon and abracadabras and learned directness in thought and simplicity in expression. Surely there is spurious learning when we speak of 'dorsal decubitus.' The medical dictionary defines 'dorsal decubitus' as 'recumbency in the supine position,' and the ordinary reader then needs another dictionary to learn that 'recumbency in the supine position' is 'lying on the back.' This by way of illustration.

"Medical thought and writings are clogged by an accepted style of expression in which words dress themselves up and assume dignities, and bow stiffly and severely, and refuse recognition. The result is that when Doc really wants to say something, he doesn't know the language. He may attempt to explain to his friends or to a popular audience, but he finds himself too ignorant to do it."

## Medicine in the Public Press

**Will Humanity Get Rid of Sleep?**—Some doctors of more or less prominence are gaining unenviable notoriety for themselves because of loose and spectacular statements about health matters. They do not always give out authorized interviews to the press. They are too clever for that. They make ambiguous statements before medical gatherings and permit their press agents to interpret these statements to the press in a spectacular manner.

One of the best recent examples of this is the extensively quoted and editorialized statement that the doctors will soon be able to do away with the necessity for sleep. Of course, these doctors did not make such a statement, but they did make statements that lent themselves to the interpretation the press put upon them.

For shame! Some of our so-called leaders seem to have lost their power of discriminating between notoriety and fame.

**The Physical Basis of Disease**—Under this caption a writer using the pen name of "The Research Worker, Stanford University," contributes a most interesting, entertaining and thought-provoking article to the Scientific Monthly. The article is a purported conversation between travelers in a Pullman smoker.

"The responsibility (for confusion in health matters) rests with the general public. Any garage that treated all broken cars by massaging the rear tire would go bankrupt. The public has sufficient knowledge of automobiles to realize the absurdity of such a method. At some time, some car owner may possibly have thawed out his radiator with a hot-water bottle. He might possibly be induced to write a testimonial endorsing the hot-water bottle method. But no business man would spend hundreds of thousands of dollars in manufacturing a special automobile hot-water bottle, in the expectation of selling thousands of these bottles to car owners for the treatment of all automobile troubles. The public, however, liberally supports hundreds of equally absurd medical devices."

"It's good business," said the manufacturer, "to give the public what it wants."

"I doubt if it's a good business policy in medicine. Hundreds of thousands of preventable deaths are caused by this policy. The economic loss is millions of dollars annually. This is eventually a drain on all legitimate business."

"There are adequate laws governing medical fakes," said the lawyer.

"The laws are neither intelligent, adequate nor well enforced. They never will be till the general public has sufficient knowledge of fundamental facts to intelligently judge medical claims."

"In the first place," said the research worker, "is there any one group of facts on which all physicians agree and which all practitioners must understand and use, no matter to what school of medicine they belong? There is such a group of facts in automobile repairing. Mechanics differ in methods, skill and efficiency in locating trouble and making repairs, but they all base their methods on an understanding of the physical nature of automobile trouble. A short circuit, a leaky valve, a cracked cylinder, deposit from inferior oil or gasoline. There is an equally fundamental group of facts in the human repair business."

"Suppose a physician doesn't accept these facts," said the lawyer.

"If a mechanic didn't believe in the existence of a short circuit, would you employ him to fix your car? His disbelief stamps him at once as incompe-

tent. A short circuit is a fundamental mechanical fact. There are equally fundamental biological facts in human disease.

The "research worker" then gives a fascinating story of the structural defects and their influence in producing disease.

**Chiropractic Certificate of Illness**—On the letter-head of —, D. C., and several other initials we do not pretend to understand, we have a certificate of illness (forwarded us by a member), which reads as follows:

"To Whom It may Concern—Mrs. — has been under my care since May 22-24, a depleted physical condition. To my personal knowledge I know that during her absence from work it was wholly do to her Physical inability."

**Los Angeles County Public Health Department Establishing a Bureau for the Care of Pre-school Age Children**—According to press dispatches, a county health bureau under the direction of the county health officer, with a primary purpose of caring for and improving the health of young children, shortly may be formed as a result of negotiations pending between the health officer and the Metropolitan Life Insurance Company. The news dispatches quote Lee K. Frankel, medical director of the local welfare bureau of the insurance company, as being sponsor of this movement. The press dispatches were forwarded to Doctor Fleisher and his comment invited. In his reply he states: "These articles greatly exaggerate the work we are doing. We have not suggested a movement of this type."

**Chiropractors' Dilemma**—When the chiropractors passed the initiative authorizing themselves to license themselves to practice medicine in California, they made the law too good. Among other provisions, in order to become a member of the chiropractors licensing board, the chiropractor must have practiced his dogma for at least three years **legally** in California. There were no legalized chiropractors in the state, so after a lot of wrangling, the Governor appointed a board of chiropractors who were licensed as drugless practitioners, and they began to function. Suit was brought, and the courts questioned the legality of this board, and they were ousted by a decision of the Supreme Court of the state. Recently the Governor has appointed another board made up of licentiates licensed by the first illegally constituted board. There will be another fine point to determine whether chiropractors licensed by an illegal board are actually licensed. One thing is certain: they are still far from the law which says they shall be licensed for at least three years. In any event, it is a fine mess.

The Governor is quoted as saying, in making his appointments: "I have appointed a board which is representative of the various chiropractic factions of the state, and all the men appointed have the necessary educational and professional qualifications. They represent different schools of chiropractics as the law requires, and are licentiates."

"The law limited me to persons who had been licensed by the first board, and no other persons could be considered. I believe this board will function to the best interests of the profession."

This new board consists of J. K. Gilkerson, Glendale; H. D. McFarland, Los Angeles; W. W. Tait, Berkeley; James Compton, Oakland; Wilfrid Clayton, San Francisco.

**Should Dirty Medical Linen be Washed in Public?**—The shortcomings of physicians are better known to physicians, of course, than they are to anyone else. There are plenty of them, and one of the efforts of

the whole profession is to reduce them as much as possible and as consistently as possible.

Since the campaign for educating everybody in health has gotten under way, a great many physicians seem to forget that there is no way of limiting the printed word to that part of the public they would like to have read any special message. Some of the things published by physicians, and even by medical organizations, are doing a great deal of harm to the cause we should all espouse. Some of the printed statements, ostensibly intended solely for physicians, attract the attention of public press editors and thus give to the writer a notoriety that he could not otherwise obtain and which, unfortunately, is sometimes looked upon by him as fame. Statements made by the most honest physicians, and with the most laudable purposes, when they get into print are liable to be utilized in ways that embarrass the physician and the profession to which he belongs.

One of the best examples of this is seen in a recent popular magazine which has millions of readers. The article, read by a physician and published in a medical journal, was abstracted in a way to reflect adversely upon physicians everywhere. In these abstracts are quoted some such statements as the following: "The well-trained doctor of medicine should be able to acquire the technique of spinal 'adjustments' and other manipulative procedures at the expense of very little time or effort. If the public is going to continue to demand that sort of thing, then there can be no great harm in supplying it. By refusing to do so, the profession is calling down upon its head undeserved epithets."

The reaction that many readers get from this is that the medical profession should sell the kind of services the public wants, regardless of whether they are right or wrong. We do not believe that one physician in 1000 will endorse statements like the one quoted, and we are convinced that at least 75 per cent will condemn in measured terms, statements suggesting such dangerous sentiments.

**Dietetics and Medical Schools**—P. M. Lovell, N. D., writes in the Los Angeles Times, in discussing dietetics in medical schools that the drugless practitioners are better educated in "natural diet" than are physicians. This because the drugless schools make a specialty of teaching diet, while the medical schools do not. "What they do teach," says this author, "is confined to unscientific calory theories, 'balanced rations,' and metabolism tests. Natural diet is utterly foreign to their curriculum."

"But, doctor, is it not true that the number of hours that the medical man spends in school is greater than that of the drugless physician?"

"True! but most of his work is spent in the study of disease so that he is not very familiar with the phenomena of health."

"As I write this article I have before me the 1923-24 catalogue of a Class A medical school of California. This medical school belongs to one of the finest universities in this country, and is thoroughly representative of the most approved of the A. M. A. schools. To get into this medical school one must have a high-school diploma showing four years' work. Then one must complete three years of preliminary preparation before being permitted to enter the school. The medical course itself consists of five years' work. Of the entire total of five school years in which every conceivable medical subject is taught, there is a total of twenty-four hours of dietetic lectures given.

"Think of it! Over 5000 hours spent on every conceivable subject apropos to disease, and a total of twenty-four hours spent in the study of the foundation science of physical health—dietetics. Is it any wonder, trained as he is, that the orthodox medical doctor, governing great hospitals and sanatoria, gives

such colossally stupid dietetic advice as is embraced in modern nutritional theories."

**Chiropractors Plan Health Education Campaign**—What the press quotes as the Southern California branch of the University of California association of chiropractors held a meeting in San Diego recently, and decided to enter the game of educating the public in health matters. Their first objective is to clarify the definition of chiropractic so that there may be no misunderstanding between the chiropractors and the seekers after health. "Honest advertising" will be another method to separate a class of pseudos from actual chiropractors. "This will help to clean the chiropractic house of those who are using chiropractic as a graft."

**The E. R. A. Bubble Explodes**—The investigation of Abrams' methods, which has been under way by the Scientific American for over a year, is nearing its close. In the August issue the editor says that:

"This will bring 'Our Abrams Investigation' to what we regard as a highly successful end. We went into it hoping that we might be able to give our endorsement to the electronic system, hoping that we might find it to be a major development of twentieth century science, fully prepared for the necessity of heralding it to the world as such. When we find that the facts lead us merely to an exposure of the greatest single piece of organized quackery in the history of medicine, however, we feel that our service to the community in so reporting is as large as though the outcome had been that which, a priori, was the more to be desired."

**Gland Transplantation Rejuvenates**—According to press reports, Dr. Stanley claims only a negligible percentage of failures in his 200 patients rejuvenated by gland transplantations. The statement was made, says the report, in a lecture before the students attending the summer session of the University of California. The thought is offered that wide publicity of the enormous prevalence of sexual impotence in California is liable to counteract somewhat the more constructive advertising of our climate and other tourist-drawing virtues.

**A Projected Innovation in Nursing Education**—According to press dispatches, the Southern Branch of the University of California and the Los Angeles County Health Department are co-operating to establish "a field-work school of nursing." Preliminary announcements regarding this project state that students of nursing will receive their theoretical and academy instruction in the university and the practical experience under the auspices of the county health department. Among the subjects to be stressed during the students' "intern" nursing service are, "prenatal, infants, child, pre-school, school, and communicable diseases nursing." Chief Nurse Simpson, the head of the school, is quoted as having said that the theories of nursing will be taught in the regular university semesters in the future instead of only in the summer sessions as in the past.

**"Doctor" W. A. Lampe**—One "Dr." W. A. Lampe, "feature specialist," was called by the defense in the trial of Mrs. Grace Baratti as an expert in gunshot wounds in the head. Agents of the Board of Medical Examiners, after investigation, arrested Lampe for practicing medicine without a license. According to press reports, this "doctor's" "only experience with gunshot wounds was that he shot himself in the head some fifteen years ago, and that the bullet still lodges in the brain." He claimed that he had practiced cosmetic surgery in San Francisco for twenty years. 'Tis said that the mills of the gods grind slowly, but surely they are more speedy than those of the law.

## California Medical Association

GRANVILLE MacGOWAN, M. D., Los Angeles...President  
EDWARD N. EWER, M. D., Oakland.....President-elect  
EMMA W. POPE, M. D., San Francisco.....Secretary

**California's Representation in the House of Delegates of the A. M. A.**—The following letter has been received by Doctor Emma W. Pope, secretary of the C. M. A., from Doctor Olin West, secretary of the A. M. A.:

"At the recent annual session of the House of Delegates of the American Medical Association, the triennial apportionment of delegates from constituent state and territorial associations was effected on the basis of one delegate for each 950 members or fraction thereof.

"Since the California Medical Association on April 1, 1924, had 3929 members, as shown by the records in this office on that date, the California Medical Association will be entitled to five delegates to the American Medical Association in 1925.

"It is quite probable that a new apportionment of delegates will be made next year as a proposed amendment to the Constitution and By-Laws, whereby the voting membership of the House of Delegates will be increased, is now pending."

### REPORT OF DELEGATES TO A. M. A.

**John C. Yates**—The June session in Chicago being my first experience as a delegate to the A. M. A., a number of little details were noticed that after further experience would probably be unnoticed. I was first particularly impressed with the character and sincerity of the members of the House of Delegates; the punctuality of the members in attending meetings; the smooth running of the house, on account of the ability of the chairman, Dr. F. C. Warnshuis of Michigan. A number of routine matters were brought up by resolution, in the same manner as followed by our own society, being referred to various reference committees for report. I think I was most particularly impressed with the solution of the medical education problem, as presented by the president, Dr. William Allen Pusey, as it seemed on the face of it to be a lowering of standards of education which have been so laboriously built up; but upon further explanation and consideration of the faults in our present system, as to great length of time required, and age of person studying medicine, before one is able to gain a livelihood, is probably driving our brighter minds into other channels of endeavor; also our seeming lack of physicians in the rural communities—that this was a working foundation, on which to start an entirely different form of education, which might work to great advantage in many ways, of course provided our graduates have ambition to fulfill the ideals put forward in the plan. Of course, there will be a number of drawbacks in many ways, and we cannot make people honest.

The next most interesting event was, probably, the action taken as to alcohol for medicinal use, in which the members who have always believed in prohibition took fully as active a part as the ones who have not been prohibitionists in feeling that the physician who really believes alcohol to be an aid in therapeutics should be allowed also to use it in accordance with his best judgment. But that the physician who in all probability is prescribing alcohol for beverage purpose should be dismissed from his local society and reported to the prohibition officers.

On Wednesday I visited the municipal pier, where the scientific meetings were held and where commercial exhibits were housed. This was a great improvement on the old way of having to go from

one hall to another, sometimes at quite a distance. One also met friends from different places very easily, thus furthering sociability and good fellowship. This probably tended to make the attendance at meetings larger than it otherwise would have been.

Thursday the chief order of business was the election of officers, which was very peaceful and harmonious. As the minutes of the meetings of the House of Delegates have been published in the Journal of the A. M. A., I feel there is no use in going into the transactions in detail.

**Albert Soiland**—Having had the honor of acting as a delegate to the American Medical Association on behalf of the California Medical Association for four consecutive terms serves as my excuse for presenting these personal remarks on the Chicago meeting of the House of Delegates.

The California delegates have always been received kindly and treated with consideration and respect by the House of Delegates. This spirit was even more apparent at the meeting just concluded and reflected the action of the membership of the house as a whole. Perhaps meeting in our own home for the first time had a good influence, and also the efforts made by Secretary West and his associates in the American Medical Association to make us comfortable. A substantial luncheon was served by the association to the delegates on Monday and Tuesday, thus conserving time and expediting the work of the House of Delegates. The president, Dr. Wilbur, addressed the delegates in his usual terse and masterful manner on some of the problems of the medical profession. He was accorded enthusiastic applause. The incoming president, Dr. Pusey, delivered a very able address, covering some of the nursing problems and many desired reforms in medical education. In addition to the customary forenoon sessions of Monday and Tuesday, the afternoons of these days were also pressed into service to take care of the unusual amount of business presented. The detail of this will, of course, be found in the minutes of the house, which are printed in the Journal of the A. M. A. On different occasions the California delegates, particularly Dr. Vechi and Edwards, were recognized by the speaker, Dr. F. C. Warnshuis, and their remarks applauded by the delegates.

There was no business transacted which specifically concerned California although a number of resolutions and reports of general interest were adopted, as will be noted in the minutes. I presented a resolution asking that the temporary Section of Radiology working under Miscellaneous Topics be made permanent. This was submitted to the Council of Scientific Assembly with the approval of the house, for action.

It might interest our members to know that the attendance at the Thursday Radiological Section was 372 and on Friday 300, and that the officers of the Council on Scientific Assembly were pleased with the tone and character of this work.

Perhaps it may be pertinent to call attention to the resolution adopted by the house, making it unethical for hospitals, institutions or individuals to advertise in general their peculiar fitness by location, excellent equipment or other personal acquisitions to take better care of patients than others not so fortunately situated. This resolution was introduced by Dr. George E. Follansbee of Ohio and appears in print on page 1966 of the June 15 issue of the Journal of the American Medical Association.

The resolution introduced by Dr. T. C. Chalmers of New York on the prohibition act is, in my opinion, a step forward in this perplexing question as it affects the medical profession. This merits study and will also be found on page 1966 of the issue referred to.

The elections on the closing day were carried out quietly and with less of the customary oratory than has been noted at other meetings. Dr. Haggard of

Tennessee received an overwhelming vote for president-elect, which was made unanimous. A full list of the events will of course appear in the official Journal.

## COUNTY NEWS

### ALAMEDA COUNTY

**Alameda County Medical Association** (reported by Pauline S. Nusbaumer, secretary)—The first meeting of the Alameda County Medical Association after vacation was held Monday evening, August 18. Considering that the members are not all back from their vacation, the meeting was well attended, some seventy-five being present.

Interesting case reports were given by A. M. Meads, Sumner Everingham, and N. A. Cary. The papers presented were: "Differential Diagnosis of Sinusitis," by Francis M. Shook; "Adjusted Compensation and How Applied," by Lieutenant C. Stanley Wood, U. S. A. (by invitation); "An Account of an Unusual Epidemic of Exanthem," by F. L. Kelly; "Pencillium Infection of the Lungs"—clinical phase, by Charles L. McVey; laboratory phase, by W. W. Reich, Ph. D. (by invitation), and were discussed by R. G. Van Nuy, Q. O. Gilbert, C. D. Sweet, and R. J. Nutting.

The following tribute to the late E. J. Boyes was presented by S. H. Buteau:

"I have known Dr. Edwin J. Boyes for more than thirty years. Our acquaintanceship was uninterrupted and progressive from the beginning, and with the years reached a close companionship. Together we have lived much of life, with all its varied experiences. I knew him well. He was a man of most unusual common sense. Every normal emotion and quality of mind were his, and yet these were so uniformly developed and rounded out, that only one characterized him—and that one was his fine wholesome optimism.

"In the sick room all his expressions of face, and voice, and conduct, were those of cheer and hope. These were ever at hand and proved most wonderful adjuncts to his scientific attainments. However, his optimism was not confined to the sick room alone, but in every walk of life it glowed and emanated from him like radiant energy. He always saw others in a favorable light, spoke well of them, and was actuated toward them by a most kindly disposition. I have on my library desk a framed motto. Its letters were made by hand, and it was given to be on a Christmas day years ago by my dear friend, Boyes. It reads as follows:

"Never say anything wrong of anyone if you are not quite sure about it; and if you are, ask yourself, 'Why do I say it?'"

"Just for a moment, in your mind, kindly give this sentiment life and universal expression, and then visualize this world of ours. You will see it as our departed associate struggled to make it.

"His life was a varied experience—a country boy, born in Canada; he passed through the graded public schools, and finally graduated at the Toronto University. Soon after this he joined a Government surveying party which blazed a pioneer trail across the great domain of British Columbia. The hardships and suffering that marked this long journey did not for a moment, during his recital of it to me, mar the wealth of enchantment that it brought into his life. After the completion of this work he entered medical college at Toronto, and, after graduating, at once began his successful professional career.

"A high scientific attainment was his; he brought it from his college. How about his wonderfully hopeful and kindly benevolent views of life? How and whence came these? It is not in colleges, it is not in books, it is not in cloistered meditation that we learn to know and feel humanity in a wholesome kindly spirit. This can be reached only in one way—by moving out into the great world, by 'knocking about the world' and thus entering into varied rela-

tions with humanity—to feel their joys and suffer their sorrows, to fight the way with them, to win with them and lose with them. These were the experiences of our co-worker, and he won out with them in a big, fine way.

"I love to recall him with the vision of the poet who saw in his type 'The sun-crowned men—men who stood above the fog in public duty and in private thinking.'"

### SAN DIEGO COUNTY

**San Diego County Notes** (reported by Robert Pollock)—During the months of July and August, all scientific programs have been omitted by the medical society, the dental society, and the various hospital staffs. The Medical Bulletin continues its publication throughout the summer.

The new Scripps Memorial Hospital, ideally constructed and equipped in every way as a small general hospital unit of fifty beds, opens its doors to the public September 1. Announcement of the personnel of its board of directors and medical staff executive will be published later. It will be conducted as an open staff hospital to all members of organized medicine.

Dr. Rawson J. Pickard and Mrs. Pickard have returned from an extended tour throughout Europe. The doctor comments upon matters of medical interest abroad in his inimitable and entertaining manner.

Dr. James W. Sherrill of New York, for the past several years associated with Dr. Frederick M. Allan of the Rockefeller Institute for Medical Research and of the Physiatrie Institute of Morristown, New Jersey, arrived in San Diego August 15 to assume the directorship of the new hospital and clinic for metabolic research at La Jolla. Cards announcing Dr. Sherrill's recent marriage to Miss Lucy Heath of New York suggest that the doctor is combining his honeymoon with his Western trip to his new home. The San Diego profession extends its warmest greetings to the young couple.

### SAN FRANCISCO COUNTY

**St. Joseph's Hospital Staff on Gastro-Duodenal Ulcers**—On August 13, St. Joseph's Hospital staff, San Francisco, held a symposium on "Gastric and Duodenal Ulcers," Dr. A. S. Musante, presiding.

W. F. Cheney spoke on "Diagnosis and Medical Treatment," the following points being noted:

The diagnosis, not so common now, with our modern investigations, depends principally upon a long-continued (1-20 years) hyperacidity, and hypochondriac pain, worse at night; and hematemesis; with remissions, especially with alkalies and food; abnormal "cap" and pyloric obstruction, although no symptom is pathognomic. Complete study must include all evidence and differentiate other confusing diseases.

Treatment is surgical only with perforation, severe hemorrhage, pyloric obstruction, malignancy signs, and where relief is not obtained medically. Dietetic, medicinal and general treatment are necessary and is ambulatory, as a rule. Increased feedings and decreased selected amounts are best. Soda, bismuth, and olive oil are useful. With improvement, increase diet, avoiding vegetables, except purees, and salty and hot foods. Soups, well-cooked cereals, milk and cream are best. Later, omit oil and drugs. If needed, put in bed and enforce rigid care.

Relapses occur after medical and surgical cures.

J. H. Woolsey discussed "Surgical Treatment of Gastric and Duodenal Ulcers," summarized as follows:

For the diagnosis of these conditions, the history is of first importance and the x-ray evidence secondary. Accompanying tenderness often means involvement outside the viscus. Medical treatment should be employed in the early ulcer, but when the condition is recurrent or evidence of obstruction, long duration of lesion, bleeding, definite gastric "niche," especially in cancer age, or perforation is present, or

social condition prevents proper dieting and rest, then surgery should be employed. Preliminary mouth hygiene is important. The type of operation varies with the lesion found at the operating-table, and the condition of the patient. The more simple the procedure and the least change of the normal course of food the better. Lesions are generally on either side of pylorus, not at it (Moynihan). Lantern slides and drawings were used to demonstrate appropriate lesions and technique of Finney's, Heineke-Mikulicz' and Horsley's pyloroplasties, gastroduodenostomy, gastroenterostomy, partial gastrectomies (Balfour-Polya and Bilroth 1 and 2), and V-shaped excision. Gastrojejunal ulcers are probably due to non-absorbable sutures. Special intestinal suture fused in needle, without eye is best. Eliminate trauma—even clamp on jejunum, if possible. Horsley, in pyloroplasty, uses three-fourths of his longitudinal incision on the stomach, and one-fourth on the duodenum, giving a cone-shaped pylorus, and does not invert layers in anastomosing. Fat over suture line prevents adhesions. For antrum ulcers partial excision is best. In V-excision an associated gastroenterostomy is favored by Balfour. No physics are used in pre-operative preparation—only an enema the night before. Hyperdermoclysis (1000-1500 cc.) in thigh is used during operation. Ice-chips are given soon. For hiccup, hot drinks are used. On third day, give soft food, baked potatoes with cream, etc. Semi-Fowler's position used for ten to twelve days, but dietary care is needed for a long time after.

D. D. Stafford and William Quinn presented cases of lung cancer.

#### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Philip C. Means, secretary pro tem.)—Santa Barbara County Medical Society met in the staff room at the Cottage Hospital, July 14, with Vice-president F. R. Nuzum presiding. Present: Twenty-one members, one intern, and two guests.

After the reading of the minutes, a letter from the local druggist's association was read, replying to a protest of obnoxious advertisements in the local papers. Satisfactory action was promised. Dues received left only one delinquent member. Five-minute case reports were given by Stevens, An Abdominal Tumor; and Koefod, Pneumococcus Septicemia. Dr. W. H. Eaton presented figures on the increased infant mortality shown by the records of the health office. Discussion was deferred to a later meeting. The paper of the evening was then presented by Clifford A. Wright of Los Angeles, "The Pituitary Gland and Some of Its Disorders." Lantern slides were shown of many patients and x-ray of each sella, with the peculiarities in manifestation. The paper brought forth much discussion and many questions.

#### YOLO COUNTY

**Yolo County Medical Society** (reported by John D. Lawson, secretary)—Regular meeting held in conjunction with bi-weekly conference of Woodland Clinic, July 10.

The program was as follows: "Relation of Physician to Patient," H. D. Lawhead, M. D. "Deep Roentgen Therapy of Uterine Myoma During Pregnancy," John D. Lawson.

John D. Lawson was elected secretary, vice Lela J. Beebe resigned. Dr. Beebe has accepted a position with U. S. P. H. S. in the child welfare division.

#### DEATHS

**Brown, Newell J., Sr.** Died at California Hot Springs, July 20, 1924, age 69. Graduate of Dartmouth Medical School, Hanover, New Hampshire, 1876. Licensed in California in 1897. He was formerly a member of the Kern County Medical So-

ciety, the California Medical Association, and a Fellow of the American Medical Association.

**Devitt, Thomas George.** Died at Montebello, May, 1924, age 57. Graduate of Trinity Medical College, Toronto, Canada. 1894. Licensed in California, 1901. He was a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.

**Eichler, Alfred.** Died at San Francisco, August 16, 1924, age 59. Graduate of Cooper Medical College, San Francisco, 1894. He was a member of the San Francisco Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Godin, Arthur Fuller.** Died at Los Angeles, July 19, 1924, age 49. Graduate of the University of Southern California College of Medicine, Los Angeles, 1901. He was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**McConnell, Allen Bonner.** Died at San Francisco, August 8, 1924, age 46. Graduate of Cooper Medical College, San Francisco, 1901. He was a member of the Fresno County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Sheppard, Christopher.** Died at Ontario, August 11, 1924, age 69. Graduate of Victoria University Medical Department, Toronto, Canada, 1890. Licensed in California in 1899. He was a member of the San Bernardino County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Wilson, Foster E.** Died at Huntington Beach, August, 1924, age 71. Graduate of the Miami Medical College, Cincinnati, Ohio, 1877. Licensed in California in 1892. He was a member of the Orange County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

#### NEW MEMBERS

Los Angeles—H. W. Boyd, Wm. E. Branch, John R. Frank, Cleve E. Kindall, I. J. Lopzich, E. W. O'Donnell, Edwin G. Schutz, W. T. Schwabland, Howard C. Slaughter, John Wesley Smith, E. D. T. Howell.

Long Beach—Lenore H. Gageby.

Sherman, Los Angeles County—J. R. Perry.

San Diego—C. N. Allison, C. P. Baxter, C. L. McAmis, Chas. Watkins Brown.

#### TRANSFERRED

Wm. M. Miller, Riverside County to Sacramento County.

J. A. Connell, San Bernardino County to Riverside County.

Roy J. Jones, Siskiyou County to Sacramento County.

Ethel M. Watters, San Francisco County to Santa Cruz County.

Henry C. Coe, San Francisco County to Alameda County.

Elizabeth Schulze-Heald, San Francisco County to Alameda County.

#### STIMULANTS AND DEPRESSANTS

"The August number of the California and Western Medicine is, in my humble opinion, one of the best samples of what a medical journal should be, that I have ever seen, and I feel that I must compliment you upon the marvelous change which you have effected in the composition of this, our 'house organ.'"—M. C., Los Angeles.

"Your plan of submitting papers for discussion before publishing them seems to me as one sure to improve the

quality of the contributions. I appreciate the request for comments upon Dr. Blank's paper."—G. R., Oakland.

"I am very greatly pleased to know that this article is to appear in California and Western Medicine. It is an honor to be associated in any way with the magnificent publication our magazine has become."—E. H. W., Los Angeles.

"I am much gratified at the discussion elicited, and believe that it all will be read with some interest when you publish it. In this connection, I believe that articles in the specialties or in general medicine in our Journal that present a new phase or savor of some original delving will benefit us more than the simple citation of the routine."—O. V. S., Los Angeles.

"It is a great privilege to prepare these discussions, as it forces me to do an immense amount of reading that otherwise I would not do."—M. B. W., San Francisco.

"As to the general plan of discussion which you are trying to install, I believe it is good and should develop information about the men throughout the state who may have ability that you can use for the literary advancement of the Journal."—W. W. C., Fresno.

"Frankly, we think it is because of the high standard of your editorial policy that your magazine receives the advertising support that it does."—Riggs Optical Company.

"I am very sorry to say that the illustrations which are reproduced in my article are so poor that they are worse than useless. I was in hopes that you might use a quality of paper that permitted showing some distinct detail instead of being an indistinct blur."—P. K. B., San Francisco.

#### ACTIVITIES OF THE BOARD OF MEDICAL EXAMINERS

We have directed our special agent to make an investigation of — at — Sutter street, San Francisco, which we presume is one of the many "beauty specialist" concerns that operate in San Francisco, says a letter from Charles B. Pinkham, M. D., secretary-treasurer.

Unless the individuals operating such concerns hold themselves out as doctors, or unless by their treatment they use any operative procedure or "filling" processes, it is practically impossible to initiate any action to discourage their procedure.

We find the victims of "beauty specialists" are most reluctant to help us prosecute, and inasmuch as the law demands testimony on the part of one who has been treated, it seems a hopeless task, although we have been working on concerns of this kind for many years, having obtained during that time about three convictions in San Francisco, and these only in the instance where the victim appeared as prosecuting witness.

Our attention, says Dr. Pinkham in a letter to Mrs. — of Woodland, has been called to a clipping from the Woodland (Cal.) Mail, June 1, 1924, the last paragraph of which reads as follows:

"Mrs. — will immunize the Clarksburg children against diphtheria Wednesday when she will hold clinic at the river town."

We are writing to advise you that such procedure, as related above, constitutes a violation of the Medical Practice Act, and refer you to Section 17 of said act, which provides a penalty for treating, diagnosing or prescribing for any ailment of the human system.

The law requires that work of this kind must be performed by one duly licensed to practice under the laws of the state of California.

"Respect for self and respect for our profession demand that our service be adequately recompensed, but we must be ever mindful that the fees which we exact should also be commensurate with our patient's ability to bear financial burden."—Journal Medical Society New Jersey.

### Nevada State Medical Association

HORACE J. BROWN, M. D., Reno.....President  
CLAUDE E. PIERSALL, M. D., Reno.....  
Secretary-Treasurer and Associate Editor for Nevada



HORACE J. BROWN  
President



C. E. PIERSALL  
Secretary and Associate Editor

**FINAL PROGRAM OF THE TWENTY-FIRST ANNUAL SESSION TO BE HELD SEPTEMBER 12, 13, 14, BOWER'S MANSION (20 MILES SOUTH OF RENO) NEVADA**

#### Officers

Horace J. Brown, president, Reno; William M. Edwards, first vice-president, Yerington; A. C. Olmstead, second vice-president, Wells.  
Trustees—A. C. Olmstead, W. A. Shaw, A. P. Lewis.

Delegate to A. M. A.—Horace J. Brown; alternate, J. LaRue Robinson.

# Committees

Membership—C. W. West, Hal L. Hewetson, B. Brown.

Judicial—M. A. Robison, Donald Maclean, R. A. Bowdle.

Scientific Work and Program—J. L. Robinson, A. P. Lewis, E. E. Hamer.

Necrology—V. A. Muller, S. R. Clark, G. L. Dembsky.

Council—C. E. Swezy, A. J. Hood (Elko), R. R. Craig, O. Hovenden, J. West Smith, D. A. Smith, S. K. Morrison, C. C. Bullette, C. H. Lehnars, C. C. Blake.

Entertainment—S. K. Morrison, W. L. Samuels, J. L. Robinson.

Public Health and Education—Henry Albert, W. A. Shaw, M. R. Walker.

Military Affairs—The president, vice-presidents, and secretary.

Friday, a. m., September 12, 1924

1. L. M. Boyers, Berkeley, California. "Human Amebiasis as a Disease Entity."

2. Henry Albert, Reno, Nevada. "Amebic Dysentery from Laboratory Standpoint." Discussion of No. 1 and No. 2 by H. L. Hewetson, I. J. Sellers.

3. A. Huffaker, Carson City, Nevada. Subject unannounced.

4. James T. Watkins, San Francisco, California. "The Treatment of Some Shoulder Injuries." Discussion by W. B. Coffee, R. A. Bowdle, Donald Maclean.

5. Cullen F. Welty, San Francisco, California. "Mastoid Surgery." Discussion by J. A. Fuller, D. L. Shaw, J. L. Robinson.

6. M. R. Walker, Reno, Nevada. "Acne." Discussion by Albert Soiland, W. N. Kingsbury.

Friday, p. m., September 12, 1924

7. Leo P. Bell, Woodland, California. "Bantis Disease from Medical and Surgical Aspects." Discussion by E. P. Sloan, W. E. Stevens, A. P. Lewis.

8. E. P. Sloan, Bloomington, Ill. "Goiter." Discussion by V. A. Muller, G. J. Bergner, T. W. Bath.

9. William E. Stevens, San Francisco, California. "Some Interesting Urological Cases in Women and Children." Discussion by B. Caples, V. A. Miller.

10. W. H. Brennen, Eureka, Nevada. "The Physician in Politics." Discussion by M. A. Robison.

11. W. H. Riley, Gold Hill, Nevada. "Problems of the Industrial Surgeon." Discussion by Donald Maclean, R. R. Craig, W. M. Edwards.

12. George Carr, D. D. S., Reno, Nevada. "Relation Between the Dental and Medical Professions." Open discussion.

Saturday, September 13, 1924

13. Albert Soiland, Los Angeles. "Radiologic Treatment of the Leukemias." Discussion by M. R. Walker, A. J. Hood (Elko).

14. Howard Naffziger, 291 Geary Street, San Francisco. "Resume of Recent Advances in the Diagnosis and Treatment of Surgical Conditions of the Nervous System." Discussion by R. H. Richardson, G. L. Servoss, A. F. Adams.

15. W. B. Coffee, Southern Pacific Hospital, San Francisco. Subject unannounced.

16. John Tees, Reno, Nevada. "Acute Primary Pyelitis in Infancy." Discussion by A. Huffaker, Carl McPheeters.

17. V. A. Muller, Reno, Nevada. "Adenoma of

the Thyroid." Discussion by E. P. Sloan, W. H. Brennen, W. A. Shaw.

18. G. Carl McPheeters, Fresno, California. "Obstetrics." Discussion by John Tees, A. B. Spalding, A. Huffaker.

19. Miley B. Wesson, San Francisco. "The Prostatic Median Bar, Complications and Treatment." Discussion by William E. Stevens, B. Caples.

Sunday, September 14, will be devoted to trips to Lake Tahoe and elsewhere. Ladies cordially invited.

The members of the Nevada State Dental Association are cordially invited to attend our annual meeting.

**Washoe County Medical Society** (reported by Vinton A. Muller, secretary)—The Washoe County Medical Society met in regular session on the evening of August 12, in the rooms of the Chamber of Commerce, Reno National Bank building, Reno, Nevada. There were twenty members and four visitors present. The chairman, Doctor R. H. Richardson, presided.

The minutes of the meeting of June 10 were read and approved.

**Applications**—During the summer recess the board of censors on membership had failed to act on the applications of Doctor Harold F. Atwood of Sparks, Nevada, and Doctor Ajika Amano, formerly of Fresno, California, therefore, these applications, together with one submitted by Doctor Mary Hill Fulstone of Wellington, Lyon County, Nevada, were held over and will be reported and voted upon at the September meeting.

**Program**—A paper on goiter, taking up the differentiation and methods of handling the various types, was presented by Vinton A. Muller, and illustrated with a series of lantern slides. J. E. Pickard of Reno opened the discussion dealing principally with the medical management of Basedow's disease. The paper was further discussed by Doctors Albert, Bath, and Ellis.

**General Business**—Professor Dinsmore, chemist at the University of Nevada, stated that his report on the iodine content of Reno's water supply was not ready. A committee consisting of Doctors M. A. Robison, J. E. Pickard, A. P. Lewis, M. R. Walker, and V. A. Muller was appointed to confer with the authorities at the State Hygienic Laboratory and render a report at the next meeting on the importance and methods of prophylaxis in regard to endemic goiter.

**New Business**—The approaching meeting of the Nevada State Medical Association to be held at Bower's mansion near Reno, in September, was discussed and the motion made, seconded, and carried that the Washoe County Medical Society obligate itself to cover any deficiency in funds that might occur relative to the entertainment of the guests.

Those present at the meeting were:

Members—Doctors Richardson, Parker, Lewis, Riley, Adams, Servoss, Pickard, West, Albert, A. J. Hood, Da Costa, Morrison, Brown, Tees, Maclean, Caples, Bath, Robinson, Robison, Muller.

Visitors—Professor Dinsmore, Doctor Marvin, Doctor Ellis, and Enichi Yamao.

Doctor Charles E. D. Lord, Ruth, Nevada, died August 16, 1924, at the Steptoe Valley Hospital from a cerebro-spinal meningitis following a right suppurative otitis media. At the time of his death, and for seven years previous, Dr. Lord had been assistant surgeon for the Nevada Consolidated Copper Co. and the Nevada Northern Ry. Co. He had charge of their work at Ruth, Nevada.

"One newspaper is quoted as stating that the most important happening in this country last year was the birth of 2,000,000 children."

## Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President  
WILLIAM L. RICH, M. D., Salt Lake.....Secretary  
J. U. GIESY, 512 Felt Bldg., Salt Lake City,  
Associate Editor for Utah

**To the Secretaries of all Component Societies of the Utah Medical Association**—The following letter has been sent to all county societies by J. U. Giesy, associate editor for Utah. The results will be reflected in this department during the coming year.

My dear Secretary—Recently the president of the Utah Society appointed the undersigned as associate editor of California and Western Medicine—the official organ of our state society, for the ensuing year.

In the past, the Utah department has not been made as much of as is believed it can be, and to the end of furthering and building up Utah's representation, I am writing to ask that each secretary of each county society forward to my address a brief resume of his society's proceedings for each month, early enough to reach me not later than the 10th of the month. On my part, copy must reach the magazine office not later than the 20th.

Furthermore, any news of members of the society should be included—the goings and comings, births, deaths, with a short obituary notice, marriages, anything of interest as affecting the membership, trips, post-graduate work, etc.

In addition, there will be space now and then available for short papers. It is suggested that each society arrange to have one or two papers on timely subjects written and sent in to this office through the secretary during the next twelve months.

I am just in receipt of a complimentary letter regarding the report of the recent state convention. Let's keep up the good work. Let me again ask your co-operation in making the magazine interesting to all the Fellows in the state, and putting Utah on the map in every state the publication may reach.

Fraternally yours,

J. U. GIESY,

**Post-graduate Week**—The Utah Medical Association Committee on Education and Post-graduate Work consisting of R. O. Porter, H. L. Marshall, W. R. Calderwood made the following announcement of plans for the annual week of graduate instruction to be held in Salt Lake City during the last week of August. We had to go to press before a final report could reach us, but it will be published in the next issue.

The course will be of six days' duration. Each morning's work will consist of two clinical lectures of approximately one hour and a half each. The first will be devoted to common problems in general medicine with emphasis on diagnosis. The second period will be devoted to pediatrics. Both of these clinics will be held in rotation at the hospitals of the city, and the point of view throughout will be to make them practical. Announcement of the instructors will be made later. Negotiations are well under way with some of the most eminent men in the United States in the lines indicated.

During the afternoons of the week it is planned to conduct in the laboratories of the University of Utah Medical School a short, intensive course in clinical laboratory methods. New and simplified procedures, suitable for the general practitioner, are constantly appearing, and many men have expressed their desire for opportunity to review the older methods. All of the facilities of the State Medical School will be available for lecture, demonstration, and actual laboratory practice.

This promises to be the most pretentious week of graduate instruction undertaken so far by the state association. Yet, in order to make it attractive to

as large a number as possible, no increase in the customary \$10 registration fee is contemplated.

**Dr. Clifford Grule**, eminent pediatrician of Chicago, has been secured to give the six clinics on pediatrics.

The lecturer on general medicine will be announced in a few days.

On July 12, the Oregon Short Line opened the third of its company emergency hospitals in the north yards at Salt Lake. This is known as the Oregon Short Line Emergency Company, and is a bungalow type structure with an emergency ward, an operating-room, a sterilizing-room, bath, and office.

Over the door is a bronze memorial tablet to Dr. S. H. Pinkerton, for many years the chief surgeon of the system. The company-owned and operated emergency hospital is the fruition of an ideal for which Dr. Pinkerton has long worked, and insofar the establishment of these hospitals becomes a monument to his endeavors to insure a competent and needful service to the company men.

The Utah department of registration, which is fostered and supported by the Utah state society, is functioning splendidly. Since the diploma-mill expose of some months ago, the department has been very busy. Some people say they are too busy. But—Lord knows it's hard enough for the regularly qualified doctors to give satisfaction, let alone a diploma-mill graduate—and there are the sick people to be considered. What does the average blacksmith know about radio anyway?

In the death of Dr. Edward Palmer Le Compte, father of Dr. Ed. Le Compte of Salt Lake, the medical profession of Utah loses one of its veterans. Dr. Le Compte was found dead in his office from cerebral hemorrhage.

Dr. Le Compte was an ex-army surgeon, having served with Custer in the early days of the West. He was born in Cambridge, Md., in 1846 and entered the United States army as a surgeon in 1874. He served under the colors until 1882. In 1878 he came to Utah and was stationed at Fort Douglas. He was married to Lydia Wells, daughter of James Wells, in 1880, and in 1883 moved to Park City, where he had lived ever since.

Besides his wife, Dr. Le Compte is survived by a son and a daughter, Dr. Edward D. Le Compte and Mrs. Wilson I. Snyder, both of Salt Lake.

During the past month the State Medical Society and the entire medical world of the intermountain country suffered an irreparable loss in the death of Dr. John F. Critchlow, who was killed on the night of July 24, when his car, carrying himself and wife, was wrecked on the road detour near Willard, Utah.

Staff members of St. Mark's hospital passed the following resolution on Dr. Critchlow's death:

"The grim reaper has once again descended upon our happy organization and has removed forever from our midst our beloved and endeared brother, Dr. John F. Critchlow. For more than twenty-five years Dr. Critchlow gave freely of his best efforts to the proper support and upbuilding of our institution. During these years he had, by his genial disposition, kindly ways and happy smiles, endeared himself to every active associate and consulting member of this staff; to the nurses who worked under and for him; to the patients relieved and cured by the deftness of his hands and the keenness of his intellect. This tremendous gap so quickly made we feel can never be filled. The kindly hand on our shoulder and the helping word in times of difficulty will be forever missed, and words are inadequate to express the greatness of our loss; therefore, be it

"Resolved, that this resolution be spread upon the minutes of this hospital staff and a copy be sent to his family, with the expression of our deepest sympathy."

The sectional meeting of the American College of

Surgeons for Idaho, Colorado, Utah, Wyoming and Montana was held at Pocatello, Idaho, August 25 and 26, 1924. An extensive and varied program regarding different phases of hospital work was carried out.

## Medical Economics and Public Health

**Malpractice Insurance**—A celebrated malpractice suit against a prominent physician in London in which the lower courts gave a very heavy penalty has recently been featured in international news. The matter is still pending in superior courts.

In the meantime, British physicians are aroused over the necessity of ample legal protection, about which the British Medical Journal made editorial comment recently, abstracts from which may be of interest to our readers.

"The first step, after being qualified to practice," says the editor, "should be to become an active member of the British Medical Association and to join one of the professional defense societies."

"As a result of the case of Harnett v. Bond and Adam (in which the latter society undertook Dr. Adam's defense), and the anxiety the decision in the lower court has aroused in the minds of the profession, the councils of the Medical Defense Union and the London and Counties Medical Protection Society, acting on the advice of a standing joint committee, have decided to afford their members 'unlimited indemnity against damages and costs of the other side on the same conditions as at present prevail.' What this new provision means is made clear by the following statement published by the Medical Defense Union in our advertisement pages this week: 'In addition to the ordinary benefits of membership, each member is now provided with unlimited indemnity against damages and costs awarded against him in any case which is undertaken by the Union on his behalf. So that by a single payment of £1 per annum each member of the Union obtains complete security.' It should never be forgotten that, however skilful and careful a medical practitioner may be, there is always the risk that his treatment and general conduct of a case may be challenged (often long after the event) by the patient or by someone acting on the patient's behalf. In view of this ever-present danger, and of the extremely moderate subscription payable for membership of the societies undertaking individual medical defense, it is most disquieting to learn, on the authority of Dr. Fegen, chairman of Council of the London and Counties Medical Protection Society, that much less than half of the practitioners of this country belong to a defense society. The childlike optimism with which some 25,000 members of our profession refrain from protecting themselves at a trifling cost against incalculable risk passes our comprehension."

Sounds much like home, doesn't it?

**Is This Limited to Indiana?**—"It is reported that some prominent members of the medical profession are having their laboratory work done gratuitously by the State Board of Health and then charging the patients for it at regular rates. If this allegation is true, then there is ample reason for the statement of the secretary of the State Board of Health that the policies pursued by the board have the endorsement of some of the prominent members of the profession. While we fully endorse the practice of charging patients for laboratory services when able to pay, and under no consideration do we uphold the policies of the state laboratories in making free examinations for any and all who come for service, yet we cannot uphold the doctor, whoever he may be, who charges for services that are rendered him gratuitously by the

state and does it with the distinct purpose of avoiding the legitimate charges that would be made if a private laboratory did the work for him."—Editorial, The Journal of the Indiana State Medical Association, July 15, 1924.

**"Spoonfeds"**—"However convincing the arguments advanced in favor of the 'Sheppard Towner' bill may be," says W. H. G. Jr. in San Diego County Medical Society Bulletin, "there yet remains room for questioning the ultimate general future. With a bureau for this and a bureau for that for whose support we are taxed by two agencies whose functions should be distinct, what is the end? The lavish expenditure, already astounding, will soon make state income taxes more prevalent than at present. For an example of efficiency one needs only to deal with one of these government organizations, that, regardless of the holy ideals expressed at the outset, have degenerated most rapidly into pastures for 'lame ducks' and loyal constituents. We've too much bureaucracy already. President Coolidge's recent warning is both timely and pertinent.

"Then, too, just how willing are we to accept state medicine with lay control? It has been tried out in Europe and found a dismal and pathetic failure. Even Russia has had to 'de-governmentalize' her physicians and put them back into the old capitalistic system. Just how 'pink' do we wish to become? Just how much of diagnosis and therapeutic advising do we wish to turn over to our lay school officials or even to our Board of Public Health? The province of the former is education and not the diagnosis of disease, and that of the latter public health matters in the bulk and co-operation with the medical profession in individual cases. The exercising of the physician's function on the part of the former (and it is being exercised) is a crime against the children of our schools, and on the part of the latter it is socialism. 'State medicine will spell the doom of inspiration in medical work and of unlimited medical progress.' 'The wild quest for the "free," the "gift," always ends in bitterness for all concerned.' The thing we get for nothing we value at nothing. 'Not protection but pressure, not a lightning but an increase in the burden makes the giant,' says Dr. Fischer of Cincinnati. May we not become 'spoonfed' in our expectation of continual and universal aid from an increasingly paternalistic federal government, spoonfed morally if not physically?"

**Health Education Conference**—A widely attended conference of several of the agencies interested in improving the health status, health outlook and health education among children was held recently at the Massachusetts Institute of Technology under the supervision of the Child Health Association. The following brief quotations from the proceedings are interesting and significant:

"The ultimate responsibility for the health education of the child lies with the classroom teacher. The teacher is 'the cloud by day and the pillar of fire by night' who will lead her children into the promised land of health and happiness.

"This is the most wonderful time in the world for health education to come into its own, for the school curricula are being made over to meet the physical, mental and spiritual needs of the individual child. **Health must be taught, and the people who are working out how it shall be done are the classroom teachers in the public schools.** . . . If the principal, the classroom teacher, the parents, the doctor, the nurse, and the physical educator all care, the child will care, and **nothing can stop this health movement.**

"It is part of a student teacher's responsibility to be physically fit. **We must not grant certificates or diplomas to teachers who are not physically fit and who have not a health consciousness.**

"Health education must not be left to the teacher of hygiene. It is only when health education be-

comes a vitalized course connected up with the life of the student that we are able to get results.

"No student has a right to follow a plan of living that will not maintain his health to the highest efficiency possible, and if the student refuses to follow such a plan he must cancel his membership in the school.

"The principles underlying the choice of subject matter for all school grades are as follows:

"1. The chief emphasis should be on personal health in the kindergarten and up to grade six.

"2. The chief emphasis should be on community health and socially healthful behavior in grades seven, eight, and nine.

"3. The chief emphasis should be on giving a scientific background in grades nine to twelve.

"By the time the child enters kindergarten, he should know the geography of his own body; that is, he should know an accurate, scientific, noun with which to designate every part of his external anatomy. He should be given the verbs to designate the various functions of the parts of the body as soon as he asks questions.

"It is as great an insult to a child's intelligence to deny him the knowledge of the marvels of his own intricate mechanism as to expect a boy to run an automobile by rote. Both the human body and an automobile cannot be run without understanding the machinery.

"The child should all along learn to watch his own progress in health as measured by the scales, and by a carefully graduated series of strength tests, stunts and games supplied by the Physical Education Department.

"The education to come must be built upon the concept of the unity of mind and body.

"Girls are interested in learning how to take care of their feet so that they can become better dancers. The care of the hair can be approached by discussing the question: 'To bob or not to bob.' Pretty smiles mean beautiful teeth, and this is a much better way to study mouth hygiene than to rehearse the old nonsense about brushing the teeth so that the cavities won't appear.

"No hard and fast rules can be made regarding methods (of teaching health). The methods must be determined by your objectives. The method itself is of less importance than the personality and enthusiasm of the teacher using it and the spirit which she puts into it.

"One of the curses of education is the idea that the doing of a particular piece of work is the important thing. But it is not. The creating of a permanent interest in the subject studied is the important thing. Are we creating in our future teachers a permanent interest in their own health and the health of others?

"A specialist is defined as a person on the school staff with specialized technical training. The opinion was expressed that the ultimate responsibility for the health education of the child lies with the classroom teacher, and that the principal function of the specialist is to give consultation service to the classroom teacher.

"A supervisor of nutrition is as necessary as the supervisor of music and art. Good nutrition is essential to strong teeth, a rosy clear complexion, a lithe body, and general good health.

"A nutrition specialist should devote special attention to the undernourished child. It is her province to follow up remedial and medical preventive work of individual pupils.

"Since the habits and attitudes acquired in pre-school years play an important part in adult life, a health program should be formulated for the pre-school years.

"If a man buys an automobile, the garage man will give him ten lessons on how to protect the car. Few parents with a baby have as much knowledge given

them about the care of the child as a Ford owner is given in starting out with a new car.

"There are two ways in which to regard the pre-school period. Some people think that this is the time to remove all temper signs, sulkiness, restlessness, and habits of disobedience. They think the child should be trained so that he can walk in line. They want the child turned over to the school as a weeded garden or an erased tablet so that the school can do its worst. Fortunately, we cannot do these things to children. A better way to consider the pre-school period is as a pace-maker for the school. We must begin in the kindergarten to stress the need for thinking of children as individual personalities.

"While recognizing the desirability of developing every possible method for measuring the results of a school health program, it must be recognized that there are fundamental benefits which are not at present subject to physical measurement.

"The few simple laws of health that were launched (during the World War) as the Rules of the Game, when we tried to keep the program simple, concrete and definite, are still the laws of health which we need to teach the children.

"Today we are being careful not to do spectacular work, but rather to build up from the bottom by training workers to teach health to children in the best possible way.

"While we go on with this health program, we must be careful or we will find ourselves on the mountain top looking back at people in the valley below. We can only go as fast and as far as the people themselves go.

"A complete health examination by a competent physician upon the entrance of every student should be the basis for the student's subsequent program. Such an examination, however, without adequate follow-up resulting in actual health maintenance and improvement is futile.

"Some institutions are already recognizing the responsibility of the student to develop the best possible standard of health for that individual. The time is doubtless at hand when a reasonable health standard, with proper consideration of the limitations of the individual, will be demanded as a requisite for graduation.

"Every teacher applying for a position should have an examination by a competent and impartial physician accredited by the Board of Education.

"Only healthy applicants should be given permanent positions, it being understood that permanent teachers' licenses will not be granted until steps have been taken toward reaching the highest physical efficiency.

"The ultimate responsibility for health education of the child in the school lies with the classroom teacher. The principal function of the specialist is to give consultation service to the classroom teacher.

"In schools where there is no special supervisor of health education, the responsibility for the health education program must rest with the superintendent or his assistants, whose duty it will be to use doctor or nurse and all other available specially trained workers to assist teachers on the technical side.

"Laboratories in the pre-school field, such as habit clinics and nursery schools, are performing invaluable service in providing information related to child care and child training for parents and professional workers. The need for extending this type of experiment is recognized. Such centers are most effective when associated with institutions of higher learning.

"Report of special committee appointed by the Chair to consider the duties of physicians, nurses, teachers, and parents in relation to the examination of the child.

"The aim of such an examination is to provide for every child a chance to achieve the limit of his endowed capacity for well-being.

"The functions of the participants should be as follows:

"Physician—1. To provide guidance toward better

health through education of the children. 2. To provide an examination service which (1) discovers all physical defects, diseases, incipient conditions and tendencies toward ill health among school children; (2) finds sources for remedy.

"Nurse—1. To assist the physician at the examination. 2. To assist in interpreting results of the examination to child, teacher, and parents in school and home through instructional conferences. 3. To stimulate and secure correction of physical handicaps.

"Teacher and parents—1. To be present at the examination, and to supply information relative to history and habits of the child. 2. To secure the co-operation of the children through class and individual instruction. 3. To gain knowledge from the examination that shall function as a basis for further health teaching."

**True for California Also**—"The question of the amount to which our dues should be raised," says the Nebraska State Medical Journal editorially, "will be determined to a degree by the patronage that our members give to those firms that advertise in the Journal. We have repeatedly stated that we cannot hope to have a substantial advertising income if we do not patronize those who use our advertising columns. A firm will gladly spend money for advertising, providing that it receives a fair return upon its investment. Business men will not buy advertising space in publications that do not bring them business. The expense of the Journal and the Society may be lessened by a large advertising revenue. We cannot secure this income if you, Doctor, do not do your part and patronize those who advertise in your Journal. It is no more than fair that you give these business firms preference when you buy your supplies. Tell them that you are giving them your patronage because they do advertise in your state medical journal. Tell the detail man that you cannot give him an order because his firm does not use the Journal's advertising columns. If you will subscribe this support and co-operate in this manner, we will obtain greater advertising revenue. You in turn will not have to meet the otherwise certain deficit by paying much higher dues. Turn to our advertising pages. Become acquainted with our advertisers and then patronize them."

"400."—We carry for the second time in this issue the advertisement of "400" furnished through the Co-operative Medical Advertising Bureau of the American Medical Association. This substance is a blending of fresh milk and chocolate syrup. It is manufactured by the dairy interests under the name of the "400" Products Company, and is marketed through grocers and milk stands. The product is recommended by physicians and both the manufacturers and the editors of medical journals would be glad to have the experiences of other physicians with it.

**New Management for Walters Surgical Company**—The Walters Surgical Company announce in the advertising pages of this issue that beginning September 1, there will be a change in their management and personnel, C. B. Walters and LeRoy Seiler being in charge, and ready to put into effect their slogan, "A Service that Serves You."

"The great deterrent to unethical practice is general medical opinion, and he who dares to cross the line immediately becomes an outcast. He cannot maintain his membership in medical societies, cannot secure or maintain desirable hospital connections and, therefore, such a loss of professional standing becomes the equivalent of professional death."—American Medicine.

**Cheerfulness**—"You get cheerfulness out of life in proportion as you put cheerfulness in. You cannot invest counterfeit coin and expect dividends in real money."—The Policy.

## BOOK REVIEWS

**Local Anesthesia.** Its scientific basis and practical use. By Prof. Dr. Heinrich Braun. Translated and edited by Malcolm L. Harris. Second American edition from the sixth revised German edition. 411 pages. Illustrated. Philadelphia and New York: Lea and Febiger. 1924.

Braun's text-book on local anesthesia is the first of many monographs which have since appeared on this subject. Most of them are better or worse, according as they deviate less or more from its methods. It will long remain a standard. The first edition was reviewed at some length in this column; the new one maintains its forerunner's sanity, thoroughness and honesty. L. E.

**Handbook of Modern Treatment and Medical Formulary.** A condensed and comprehensive manual of practical formulas and general remedial measures. By W. B. Campbell. Seventh edition. Philadelphia: F. A. Davis Co. 1924.

These collections of prescriptions have grown out of fashion. When one looks the book over and finds formulas containing eight or more ingredients, one is inclined to bless the activities of the American Medical Association, which has been one of the strongest factors in rescuing the medical profession from these illogical and cumbersome methods of prescription. L. E.

**The Operating Room.** Instructions for nurses and assistants. St. Mary's Hospital, Rochester, Minn. 165 pages. Illustrated. Philadelphia and London: W. B. Saunders. 1924.

A useful book for operating-room nurses, in which surgeons also will take interest. The instrumentaria for various operations are listed, and the efficient and economical methods of the Mayo Clinic are set forth. L. E.

**Pathological Technic.** A practical manual for workers in pathological histology and bacteriology. By Frank Burr Mallory and James Homer Wright. Eighth edition. 666 pages. Philadelphia and London: W. B. Saunders Co. 1924.

The eight editions of the book by Mallory and Wright speak for themselves. This present new edition contains some additional chapters on spinal fluid, and chapters on photography as used in the pathological laboratory, which will be of value. The book is indispensable in every pathological laboratory. L. E.

**Generalized Pain.** By Prof. Dr. Norbert Ortner. Translated by Francis J. Rebman. 596 pp. New York: Medical Art Agency. 1922.

Prof. Ortner has completed his work, "Clinical Symptomatology of Internal Diseases" in the second volume entitled, "Generalized Pain." This latest volume of 596 pages represents "a complete symptomatology of all painful sensations experienced by the human organism, with the exception of the abdominal region," the latter being taken up in the first volume.

Pain has always been the most important symptom in disease, but its explanation has remained to a certain degree veiled, especially when it is a manifestation of a distant focus. The author has revealed the underlying causation of pain to a large degree. The excellent differential diagnosis of pain in the various anatomical divisions is of great importance, and the

book's usefulness is primarily due to this feature. The enumeration of pathological entities underlying painful sensation, even of the more simple anatomical regions, taxes the clinical abilities even of the most experienced observers. One cannot but question at times the accuracy of the author's interpretation of pain in obscure conditions.

The differential diagnosis of conditions producing cardiac pain is well done, especially that section pertaining to angina pectoris. The importance of a clear understanding of angina pectoris and pseudoangina cannot be too greatly emphasized.

No portion of the anatomy has been slighted by Dr. Ortner in his very careful and discriminating discussion of the etiology of pain. His work shows throughout the background of a vast clinical experience, coupled with the keen insight of a trained observer, and links him with other primary clinicians and observers, such as McKenzie, Albutt, and Wenckbach.

D. D. L.

## BOOKS RECEIVED

**International Clinica**, a Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, M. D., Philadelphia, with the collaboration of a distinguished board. Volume II, Thirty-fourth Series, 1924. Philadelphia and London: J. B. Lippincott Company, 1924.

**The Nature of Love**. By Emmanuel Berl. Authorized translation by Fred Rothwell. New York: The Macmillan Company, 1924.

**Diabetes, Its Treatment by Insulin and Diet**, a Handbook for the Patient. By Orlando H. Petty, M. D., Professor of Diseases of Metabolism, Graduate School of Medicine, University of Pennsylvania. With several illustrations. Philadelphia: F. A. Davis Company, Publishers, 1924.

**Manual of the Diseases of the Eye**, for Students and General Practitioners. By Charles H. May, M. D., Director and Visiting Surgeon Eye Service, Bellevue Hospital, New York. Eleventh edition, revised. With 374 original illustrations, including 23 plates, with 73 colored figures. New York: William Wood & Company, 1924.

**Goiter: Non-surgical Types and Treatment**. By Israel Bram, M. D., Instructor in Clinical Medicine, Jefferson Medical College. New York: Macmillan Company, 1924. Compliments of the author.

**The Medical Department of the United States Army in the World War**, Volume XI, Surgery, Part Two. Prepared under the direction of Major-General M. W. Ireland, M. D., Surgeon-General of the Army. Washington: Government Printing Office, 1924.

**Amputations, Operative Technique—Formation and After Treatment of the Stump from the Standpoint of Prosthesis**. A study based on 1700 cases of amputation for injuries and disease occurring in the World War and since its termination. By Norman Thomas Kirk, M. D., Major Medical Corps, U. S. Army. Published under the authority and with the approval of the Surgeon-General, U. S. Army. Copyright 1924, The Medical Interpreter.

**Looking Back**—It is a good thing occasionally for a physician to cast his mind back to the economic and pathologic failures that he has made, so states the Medical Sentinel (July, 1924). He may not wish to recount them to his neighbors or publish them to the world, but it is undoubtedly true that one may learn as much from his failures as from his successes.

## CORRESPONDENCE

In accordance with the request of the American Children Health Association, we are publishing the following essay as submitted. Some phases of this problem are discussed editorially in this issue:

Editor California State Journal of Medicine, San Francisco, Calif.

Dear Sir: We will appreciate the publication of the enclosed article on the Far Western Child Health Demonstration. Sincerely yours,

ANNA B. TOWSE,

Editorial Associate, Division of Publications.

### FOURTH CHILD HEALTH DEMONSTRATION

S. J. Crumrine, M. D., Director of Public Health Relations, American Child Health Association

Recently the Commonwealth Fund Committee of New York City announced that "Some community of the Far West is to have an opportunity for national assistance in showing how far it may, during the next five years, safeguard the life and health of its mothers and children, as a contribution to a national program for the health of children." Continuing, the announcement reads: "There will be one paramount consideration in making the choice, namely, the sincerity of the community's desire to develop and complete a rounded child health plan for the community as a whole."

Manifestly, the success of "a complete and rounded child health plan for a community as a whole" must be conditioned upon the sympathetic support and hearty co-operation of the medical profession of the community selected. In the 1923 annual report of the Commonwealth Fund, page 13, is found the following statement:

"Whatever be the merits of state medicine, the Commonwealth Fund is not lending its influence to anything of the sort. It has no desire to interfere with the practice of private physicians; on the contrary, their co-operation has been sought and freely offered. An educational and preventive program of this character, far from decreasing the need of the physician's service, should increase it. Absolutely no remedial work is or will be done; while the influence of the demonstration staff is constantly exerted in educating people to make use of the physician's services in order not alone to get well but to keep well."

The objectives of the demonstration might be summarized as follows:

1. By careful inventory and study, to determine the health needs of the community.
2. To prepare a program that may adequately meet these needs.
3. To select a personnel of such training and experience as may give reasonable assurance of maximum results.
4. To measure and evaluate methods, results and costs for general publication.
5. To conduct the demonstration along practical lines, so as to stimulate other communities in the Far West to undertake similar activities for child health.

Special consideration will be given to health teaching in the schools, for it is believed that the solution of the health problem for individual, community and nation rests upon the teaching of health in our schools, which must be of a kind and character to register in the formation of positive health habits. If, with the inculcation of health habits in the school and the home, the on-coming generation can be taught that to seek the advice of the doctor in matters of health as well as disease is but common sense and prudence, that the opinions of the untrained and uneducated neighborhood granny or quack are fraught with potential danger, as is also the patent

medicine bottle, that positive health rather than freedom from disease is the standard toward which both doctor and client should strive; then, the physical strength, efficiency and happiness of the race are reasonably assured, and with such assurance the medical profession will occupy its rightful place in the social fabric of the community it serves.

#### ACKNOWLEDGMENT OF REPRINTS

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- DuBray, Ernest S. Diet Adjustment and Insulin Therapy in Diabetes Mellitus. Reprinted from the California State Journal of Medicine, December, 1923.
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- Duncan, Rex. Relation of Surgery and Radiotherapy in the Treatment of Malignant Diseases. Reprinted from California and Western Medicine, June, 1924.
- Fleischner, E. C. Bronchial Lymphadenopathy Non-tuberculous. Reprinted from The Journal of the American Medical Association, July 15, 1922, Vol. 79, pp. 175-180.
- and Shaw, E. B. The Specific Treatment of Diphtheria. Reprinted from Archives of Pediatrics, Vol. XXXVIII, No. 10, October, 1921.
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- and Veckl, M.; Shaw, E. B.; Meyer, K. F. The Pathogenicity of B. Abortus and B. Melitensis for Monkeys. Reprinted from The Journal of Infectious Diseases, Vol. 29, No. 6, December, 1921, pp. 663-698.
- Franklin, Edward A. Function of Neuroglial Tissue—Facts and Theory. Reprinted from The Journal of Nervous and Mental Diseases, Vol. 60, No. 1, July, 1924.
- Gottlieb, Abraham. Arch Supports—Their Abuse and Proper Indication. Reprinted from The Journal of the American Medical Association, January 26, 1924, Vol. 82, pp. 295 and 296.
- Kilduffe, Robert A. The Complement-Fixation Reaction in Tuberculosis With Kolmer's Quantitative Method. Reprinted from The American Review of Tuberculosis, Vol. IX, No. 2, April, 1924.
- The Case for and Against the Quantitative Complement-Fixation Test in Syphilis. Reprinted from The Archives of Dermatology and Syphilology, May 1924, Vol. 9, pp. 571-576.
- A Graphic Chart for Recording the Results of Treatment in Syphilis. Reprinted from The American Journal of Syphilis, Vol. VIII, No. 3, July, 1924.
- The Status of the Complement-Fixation Test in Relation to the Cure of Syphilis. Reprinted from The Archives of Dermatology and Syphilology, July, 1924, Vol. 10, pp. 63-68.
- Meyer, K. F.  
See Fleischner, E. C.
- Morgan, Norman D. An Operation for the Correction of Proctientia or Marked Cystocele and Rectocele. Reprinted from Surgery, Gynecology, and Obstetrics, April, 1924, p. 559.
- Rowe, Albert H. The Value of Basal Metabolism Studies in the Diagnosis and Treatment of Thyroid Disease. Reprinted from the American Journal of the Medical Sciences, August, 1921, No. 2, Vol. CLXII, p. 187.
- Focal Infection from the Internist's Point of View. Reprinted from Northwest Medicine, February, 1923.
- The Diagnosis and Treatment of Thyroid Disease as Controlled by the Metabolic Rate. Reprinted from Endocrinology, March, 1923, Vol. VII, No. 2.
- Insulin Treatment of Diabetes Mellitus. Reprinted from California State Journal of Medicine, May, 1923.
- The Insulin Control of Diabetes Mellitus and Its Complications. Reprinted from Endocrinology, November, 1923, Vol. VII, No. 5, pp. 670-680.
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- Schmitt, L. S. Periodic Health Examinations and the Education of Medical Students for this Service. Reprinted from the Proceedings of the Annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals, Chicago, March 3, 4, and 5, 1924.
- Shuman, John W. A Lutheran Doctor in Syria. Reprinted from The Lutheran, May 29, 1924.
- Hyatid Brain Cyst. Reprinted from Medical Journal and Record, July 16, 1924.
- Shaw, E. B.  
See Fleischner, E. C.
- Veckl, M.  
See Fleischner, E. C.

#### BOARD OF MEDICAL EXAMINERS

Legal hearings before the Board of Medical Examiners, July meeting (as reported by C. B. Pinkham, M. D., secretary).

**Adcox, Reuben, M. D.** This individual under the name of Robert Adcox has been prominently mentioned in reports as one of the principals in the diploma mill conspiracy. He gained admission into California by reciprocity in 1919, based on a Missouri license dated July 11, 1910. In connection with his alleged diploma mill activities, he was recently reported as convicted of bribery in St. Louis, Mo., and sentenced to two years' imprisonment. After hearing the evidence, the certificate of Reuben Adcox to practice in the state of California was revoked on Monday, July 7, 1924.

**Coleman, Stuart, M. D.** A citation was based on the record of the Federal Court conviction of violation of the Harrison Narcotic Act, and his case was continued to the October (1924) meeting owing to a pending appeal from the judgment of conviction.

**Dietsch, Curt O., M. D.** Had been found guilty of an alleged illegal operation charge at a hearing held before the board February 16, 1921, and his certificate was revoked July 8, 1924.

**Dyment, Philip, M. D.** Obtained reciprocity license in California in 1917 based on Georgia credentials. The Georgia board later reported that they had ascertained that the examination alleged to have been taken by Philip Dyment, M. D., was in reality taken by an individual named Lucius Gould Wright. Georgia revoked on the basis of Dyment having obtained his license by fraud, and in 1918 Dyment's California certificate was revoked. However, his appeal to the higher courts resulted in the judgment of the board being set aside on the basis of faulty complaint, and the court further "directing the board to take such further proceedings as it may be advised to take in the proceeding against appellant pending before it, all in accordance with the views expressed in this opinion." Citation was again issued, and a hearing held before the board July 8, 1924. Testimony was introduced consisting of certified copies of the records of the Georgia board, certified copy of an examination paper written in the subject of Pathology at the Georgia examination by the individual known as Philip Dyment, which, according to the testimony of Carl Eisenschimmel, handwriting expert, was not the handwriting of Philip Dyment, who obtained a reciprocity license to practice in the state of California. After the board had listened to the testimony, the license of Philip Dyment to practice in the state of California was revoked July 8, 1924.

**Mace, Robert D., M. D.** Dr. Mace was cited, based upon record of conviction. There being an appeal pending, the board put the matter over for disposition at the October (1924) meeting.

**Renwick, Robert, M. D.** Dr. Renwick was charged with associating himself with an unlicensed practitioner, said unlicensed practitioner having been alleged to have so severely "baked" the feet of a patient seeking chiropody treatment as to have alleged to have caused said patient's death. The case was put over to the next regular meeting in Los Angeles.

**Rinaldo, Eugene J., M. D.** Dr. Rinaldo obtained reciprocity license in the state of California in 1922, based upon Missouri credentials. Testimony was introduced showing that the 1908 diploma of the St. Louis College of Physicians and Surgeons, on which Rinaldo was admitted to examination before the Missouri board in 1920, was fraudulent; that the certificate of pre-medical education presented to the Missouri board by Rinaldo in 1920 was, according to the affidavit of W. P. Sachs, whose signature is affixed to each of said documents, sold by said W. P. Sachs to Robert (Reuben) Adcox and that Sachs had never seen Rinaldo; that, according to an affidavit introduced in evidence signed by Eugene J. Rinaldo

and reported as presented by him to the St. Louis College of Physicians and Surgeons in 1918, Eugene J. Rinaldo stated he attended the first three years of medical instruction in the Pacific Medical College, Los Angeles, although in Rinaldo's sworn statement before the California board at the February (1924) meeting, he stated during the same period as his relating attendance at the Pacific Medical College he was conducting a conservatory of music and a military academy in Missouri. After the board had heard the testimony, the license of Eugene J. Rinaldo, M. D., to practice in the state of California was revoked on July 9, 1924.

**Sturges, Roy L., M. D.** Dr. Sturges appeared before the board in answer to citation based upon Harrison Narcotic Act violation. Was found guilty on July 8, 1924, and placed on probation for five years.

**Viereck, Henry C., M. D.** Dr. Viereck was charged with habitual intemperance. The case was called. Dr. Viereck did not answer. Testimony was introduced, and on July 8, 1924, the license entitling Henry C. Viereck, M. D., to practice as a physician and surgeon in the state of California was revoked.

Very truly yours,

C. B. PINKHAM, M. D.,  
Secretary-Treasurer.

### ANNUAL CONFERENCE OF THE HOSPITALS OF CALIFORNIA, LONG BEACH, NOVEMBER 6, 7, 8

The committee appointed at the 1923 Conference of Hospitals of California to investigate the costs of hospital service and report to the 1924 Hospital Conference upon the possibilities of rendering hospital care more economically, adequately and efficiently, not only to those who are able to pay the full cost of such service, but also to those who cannot pay the present prices asked for such service, has issued a comprehensive questionnaire. As our readers will observe, the questions asked by the committee relate to facts which determine the costs of hospital care. To have time to assemble and analyze the data and to complete its report, the committee requests that replies be placed in its hands before September 15. The full report of the committee will be made at the Annual Hospital Conference, which will be held at Long Beach, November 6, 7, 8, 1924.

#### Questionnaire

Total Beds . . . . Men . . . . Women . . . . Children . . . .  
Single Private Rooms . . . . . Double Private  
Beds . . . . . Ward Beds . . . . .  
Beds Available for Medicine and Medical Special-  
ties . . . . .  
Beds Available for Surgery and Surgical Special-  
ties . . . . .  
Beds Available for Obstetrics . . . . .  
Neuropsychiatry Patients . . . . .  
Beds Available for Contagious Disease Patients . . . . .  
Number of Different Patients Treated in the Hos-  
pital During Year . . . . .  
Births . . . . . Deaths . . . . .  
Stillbirths . . . . . Autopsies . . . . .  
Number of Patients Visiting Clinic . . . . . Number of  
Clinic Visits . . . . . Total Income from Clinic \$ . . . . .

#### Patient Days

Total Patient Days All Classes for Year . . . . .  
Total Paying Full Rates . . . . .  
Total Paying Part Rates . . . . .  
Total Free Service . . . . .

#### Financial

Value of Hospital Site . . . . . \$ . . . . .  
Value of Buildings and Permanent Improve-  
ments . . . . . \$ . . . . .  
Value of Equipment and Furnishings . . . . . \$ . . . . .  
Total Endowments . . . . . \$ . . . . .  
Total Assets . . . . . \$ . . . . .

Alterations and Repairs . . . . . \$ . . . . .  
Replacements for Buildings, Equipment and  
Furnishings . . . . . \$ . . . . .  
Mortgages, Notes and Other Standing In-  
debtedness . . . . . \$ . . . . .  
Bonded Debt . . . . . \$ . . . . .  
Amortization Charges for Retiring Bonds . . . . . \$ . . . . .  
Taxes of All Kinds . . . . . \$ . . . . .  
Capital Stock Authorized . . . . . \$ . . . . .  
Stock Sold . . . . . \$ . . . . .  
Dividends . . . . . \$ . . . . .  
Interest Payable . . . . . Interest Receivable . . . . . \$ . . . . .  
Uncollectable Accounts . . . . . \$ . . . . .  
Insurance of All Kinds—Amount of Cover-  
age . . . . . \$ . . . . .  
Total Premiums . . . . . \$ . . . . .

#### Earnings, Expenses, Receipts and Disbursements

In addition to the figures requested above:

Gross Earnings of all services of whatever character  
figured at regular Hospital Book Rates.

(Please itemize this answer.)

..... \$ . . . . .  
..... \$ . . . . .

Gross Expenses (Please itemize this answer).  
..... \$ . . . . .

..... \$ . . . . .  
..... \$ . . . . .

Total Receipts From All Sources of Whatever Char-  
acter (Please itemize this answer).  
..... \$ . . . . .

..... \$ . . . . .  
..... \$ . . . . .

Total Disbursements From All Sources of Whatever  
Character (Please itemize this answer).  
..... \$ . . . . .

..... \$ . . . . .  
..... \$ . . . . .

#### Additional Information

Total Salaries:

(a) Physicians . . . . . \$ . . . . .  
(b) Technicians . . . . . \$ . . . . .  
(c) Nurses . . . . . \$ . . . . .  
(d) Dietitians . . . . . \$ . . . . .  
(e) Laboratory Workers . . . . . \$ . . . . .  
(f) Other Technicians . . . . . \$ . . . . .  
(g) Other Employees . . . . . \$ . . . . .

Total Extra Charges Collected:

(a) Operating Room Fees . . . . . \$ . . . . .  
(b) Anesthetic Fees . . . . . \$ . . . . .  
(c) Laboratory Fees of all kinds . . . . . \$ . . . . .  
(d) Radiology Fees of all kinds . . . . . \$ . . . . .  
(e) Nurses' Fees of all kinds . . . . . \$ . . . . .  
(f) Other Extras . . . . . \$ . . . . .

Total Cost of Subsistence per capita per day:

..... \$ . . . . .  
Cost of Meals . . . . . \$ . . . . .

(In each of these answers, if the work is done out-  
side of the Hospital, please give the name of the per-  
son or laboratory performing the work and state  
whether the Laboratory or the Hospital collected  
from the patients.)

Total Profits for 1923 . . . . . \$ . . . . .  
Deficit for 1923 . . . . . \$ . . . . .

Please fill in and mail this Questionnaire as  
promptly as possible to Hospital Betterment Service  
Bureau, John H. Graves, M. D., 593 Market Street,  
San Francisco, Calif.

The 1924 Hospital Conference promises to surpass  
preceding hospital conventions in interest and attend-  
ance. Representative hospitals will send one official  
delegate from each of the following: Ownership, di-  
rectorate, administration, staff, nursing, and all pro-  
fessional and technical departments.